Quarterly Progress Report January - March 1994 Boise, Idaho 3/24/94

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Prepared for

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HLA Project No. 22947 03

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March 24, 1994



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DISTRIBUTION

EXECUTIVE SUMMARY

This progress report presents data collected and summarizes activities performed in association with ongoing investigations by VW&R in Boise, Idaho, from December 25, 1993, through March 25, 1994. Activities to be conducted during the next reporting period are also presented.

Activities conducted under the Water Supply Order during the reporting period include:

- Connecting residents to the Boise Water Corporation (BWC) water system as authorization is received by VW&R
- · Conducting quarterly sampling
- Extending the water main along Maple Grove Road between the South Slough and Ridenbaugh Canal

Work planned for the next reporting period includes:

- Sending out a final notice certified letter to residents within the Affected Area who have not connected to the BWC water system
- Resampling wells with tetrachloroethylene (perc) concentrations above the analytical detection limit but below 5 micrograms per liter (µg/l) and other selected wells in the PSA as part of a quarterly sampling program
- Continuing water line connections as authorizations are received and reimbursement for 1 year of BWC utility costs
- Sending out a letter to residents with deep wells requesting permission to abandon the wells

Activities conducted under the PSA Order during the reporting period include:

- Submitting a final Risk Assessment Work Plan
- Initiating Risk Assessment activities

- Installing a monitoring well at 2212 N.
 Sunrise Avenue in accordance with the Soil Boring Sampling and Analysis Plan (SAP)
- Continuing access negotiations with property owners for the installation of extraction/monitoring wells

Activities to be conducted under the PSA Order during the next reporting period include:

- Installing two extraction/monitoring wells along N. Five Mile Road in accordance with the Soil Boring SAP
- Continuing activities associated with completion of the Risk Assessment
- Submitting a Geophysical SAP approximately two weeks after completion of the soil boring field program

Work conducted under the Mall Order during the reporting period included:

- Finalizing the Asymptotic Protocol
- Drilling five soil borings and collecting soil samples to evaluate the effectiveness of the soil vapor extraction system
- Installing an extraction/monitoring well at the Pier 1 Imports store
- Continuing activities associated with the Risk Assessment
- Monitoring the soil vapor extraction system.

Work planned for the next reporting period in association with the Mall Order includes:

- Monitoring the soil vapor extraction system
- Submitting the Mall Risk Assessment Report
- Initiating work on the Mall Site Investigation Report/Remedial Action Plan.

1.0 INTRODUCTION

This progress report presents data collected and summarizes activities performed in association with ongoing Van Water & Rogers Inc. (VW&R) investigations in Boise, Idaho, from December 25, 1993, through March 25, 1994. This progress report has been prepared by Harding Lawson Associates (HLA) for the sole use of VW&R and the State of Idaho Department of Health and Welfare, Division of Environmental Quality (Department), the only intended beneficiaries of our work. No other party should rely on the information contained herein without prior written consent of HLA.

This report has been prepared to meet the requirements of the Consent Orders dated October 9, 1992 (Boise Mall and Preliminary Study Area [PSA] Orders), between VW&R and the Department. The scope of work for this report was originally outlined in Exhibit 3, Work Plan, Boise Towne Square Mall Supplemental Investigation and Final Remediation, Boise, Idaho (HLA, 1992a). This report presents a summary of activities conducted during the reporting period and activities to be conducted during the next reporting period associated with the Water Supply Order dated January 3, 1992, and the PSA and Boise Mall Orders.

2.0 WATER SUPPLY ORDER

2.1 Work Conducted During the Reporting Period

Activities conducted under the Water Supply Order during the reporting period included:

- Connecting residents to the Boise Water Corporation (BWC) water system as authorization is received by VW&R
- Conducting quarterly sampling of wells
 historically containing tetrachloroethylene
 (perc) above the analytical detection limit but
 below the EPA's maximum contaminant level
 (MCL) of 5 micrograms per liter (µg/l) and
 other select wells
- Extending the water main along Maple Grove Road between the South Slough and Ridenbaugh Canal so that an additional resident may be connected to the BWC water system.

2.1.1 Quarterly Sampling

In accordance with requirements of the Water Supply Order, wells containing perc concentrations above the analytical detection limit but below the MCL of 5 μ g/l and other selected wells were sampled to monitor the dissolved perc concentration in groundwater. Groundwater sampling was conducted on February 24, 1994. Prior to sampling, authorization was obtained from well owners to collect samples from their wells. Three wells normally sampled as part of the regular quarterly monitoring program were not sampled due to inoperative pumps. One new well has been added to the regular quarterly sampling program due to perc concentrations detected in a sample collected from the well by VW&R in December 1993. In addition to wells sampled as part of the regular quarterly program, authorization was obtained from one property owner whose property is located near the downgradient edge of the Affected Area as defined by HLA's letter dated March 24, 1993 (HLA, 1993a). The purpose of sampling the additional well was to monitor dissolved perc

concentrations in groundwater near the downgradient edge of the Affected Area.

Sample collection activities were performed in accordance with the Quality Assurance Project Plan (QAPP) and are described in the following sections (HLA, 1992b). The sampling method used to collect groundwater samples from the private wells was a function of well construction and access. In general, wells were purged with their installed pumps for a minimum of 5 minutes and until the pH, temperature, and conductivity readings stabilized. Following purging activities, groundwater samples were collected from the discharge line at the access point closest to each well. All samples were placed in sample containers appropriate for the required analysis. All samples were placed in a cooler that was chilled to a temperature of approximately 4 degrees Celsius and sent under chain of custody via overnight courier to Analytical Technologies, Inc. (ATI), Renton, Washington.

Duplicate samples were collected from two wells and laboratory-prepared trip blanks were shipped in the coolers along with the well samples to the analytical laboratory.

All samples were analyzed by ATI for halogenated volatile organic compounds (VOCs) using EPA Test Method 8010. Specific analytical results obtained from private well samples are confidential. In general, perc was detected in 11 of the 13 samples at concentrations ranging from 0.3 to 340 μ g/l. Two samples contained perc at concentrations greater than the EPA's MCL of 5 μ g/l. Nine samples contained perc at concentrations above the detection limit but below the MCL. Trichloroethene (TCE) was detected in two well samples at concentrations of 0.5 and 0.7 μ g/l. 1,1,1 trichloroethane was detected in one well sample at a concentration of 0.3 μg/l. Trichlorofluoromethane, a common refrigerant, was detected in one well sample at a concentration of 0.9 μ g/l. 1,2-dichloroethane (1,2-DCA) was detected in six samples, including the trip blank, at concentrations ranging from 0.2 to 0.4 μ g/l. 1,2-DCA is qualified as non-detect in

all of the well samples due to its detection in the trip blank. Other halogenated VOCs were not detected in the trip blank.

Evaluation of quality assurance/quality control data indicated that the data are accurate and precise (Table 1). The data also met the method-specified holding times. Overall completeness was 99 percent and exceeds the goals specified in the QAPP (HLA, 1992b).

The individual results of the sample analyses have been provided under separate cover to each of the respective well owners.

2.2 Work Planned for Next Reporting Period

A final notice letter will be sent via certified mail to residents who have not responded to VW&R's offer to connect the residence to the BWC water system.

Wells with concentrations of perc above the analytical detection limit but below the MCL of 5 μ g/l and other selected wells will continue to be sampled on a quarterly basis. In addition, the groundwater monitoring well installed on Sunrise Avenue (described in Section 3.1.2) will be included in the quarterly sampling program. Sampling activities for the second quarter of 1994 are currently scheduled for mid-May.

Activities relating to well closure associated with the Water Supply Order will be initiated during the next quarter.

Connections to water mains will continue during the next reporting period until all connections are completed for properties whose owners have provided written authorization to VW&R. Reimbursement for one year of BWC water utility costs continues for west Boise residents as requests are received by VW&R.

3.0 PRELIMINARY STUDY AREA ORDER

3.1 Work Conducted During the Reporting Period

3.1.1 PSA Risk Assessment Work Plan

The Department approved the draft Risk Assessment Work Plan on December 16, 1993. A final Risk Assessment Work Plan was submitted to the Department on December 28, 1993 (HLA, 1993d). The purpose of the work plan was to present a summary of data collected in the PSA to date, provide a preliminary exposure analysis using those data, and to describe the approach for conducting the PSA Risk Assessment (RA). The objective of the RA is to evaluate potential threats to human health and the environment from exposure to chemicals detected in groundwater and surface water in the PSA. The RA will also identify preliminary remediation goals (PRGs) for the PSA. HLA is in the process of implementing the Work Plan.

3.1.2 Monitoring Well Installation

A monitoring well was installed at 2212 N. Sunrise Avenue between February 22 and 23, 1994. The well was installed to monitor groundwater quality between the downgradient edge of the Affected Area and the BWC Bali Hai Well. Drilling, sample collection, equipment decontamination, and other field activities were conducted in accordance with the QAPP (HLA, 1992b) and the Soil Boring SAP (HLA, 1993c). The boring for the well was drilled using a hollow stem auger drill rig to a maximum depth of 50 feet. The boring was logged by an HLA geologist using soil cutting samples. The lithologic log showed sand and gravel throughout the boring and is included in Appendix A.

Chemical profiling was performed at 10-foot intervals throughout the boring. Groundwater samples were collected using a Hydropunch™ sampler at depths of 20, 30, 40, and 50 feet. The samples were transported to Alchem Laboratory, Boise, Idaho, where they were analyzed on a 24-hour turnaround basis for halogenated VOCs using EPA Test Method 8010. The analytical

results are presented in Table 1. Laboratory Analytical reports are included in Appendix B. Halogenated VOCs were not detected in any of the samples nor in the trip blank above the laboratory reporting limit of $0.5~\mu g/l$. Based on these analytical results and discussions with the Department, the well was completed to a total depth of 40 feet with a screened interval extending from 20 to 40 feet. Well construction details are presented along with the boring log on Plate 1.

Following well completion, the well was developed. On March 9, 1994, two groundwater samples were collected from the well and an equipment blank collected from the bailer. The samples were shipped to ATI, Renton, Washington, where they were analyzed for halogenated VOCs using EPA Test Method 8010. The analytical results are presented in Table 2.

The laboratory analytical results indicate that perc was detected in both well samples at a concentration of 0.3 μ g/l. Chloroform, a common laboratory contaminant, was detected in the equipment blank at a concentration of 0.4 μ g/l but was not detected in either of the well samples. Other VOCs were not detected in the samples nor in the equipment blank.

3.1.3 Access for Well Installation Along N. Five Mile Road

Access negotiations continued during the quarter with property owners for installation of the two proposed monitoring/extraction wells along N. Five Mile Road.

3.2 Work Planned for the Next Reporting Period

Work activities associated with completion of the PSA Risk Assessment will continue during the next quarter.

Once access is granted, the monitoring/extraction wells will be installed along N. Five Mile Road in accordance with the PSA Soil Boring SAP (HLA, 1993c).

Following completion of the soil boring program, a Geophysical SAP is scheduled to be submitted to the Department.

4.0 BOISE MALL ORDER

4.1 Work Conducted During the Reporting Period

The following activities were conducted during the reporting period:

- Finalizing the Asymptotic Protocol
- Drilling five soil borings and collecting and analyzing soil samples from the borings to evaluate the effectiveness of the SVE system
- Installing and sampling an extraction/monitoring well near the former aboveground perc tank at the Pier 1 Imports store
- Monitoring the soil vapor extraction system.

4.1.1 Asymptotic Protocol

A final Asymptotic Protocol was submitted to the Department on January 5, 1994 (*HLA*, 1994). The Asymptotic Protocol describes the statistical approach proposed for identifying and calculating when an asymptotic limit for regulated chemicals has been attained in groundwater during groundwater remediation at the Mall. Final approval of the Asymptotic Protocol has been received from the Department.

4.1.2 Soil Boring Program

To evaluate the effectiveness of the SVE system, five soil borings were drilled in the vicinity of the former tank location at the Pier 1 Imports store on February 23, 1994 (Plate 1). Drilling, sample collection, equipment decontamination, and other field activities were conducted in accordance with the QAPP (HLA, 1992b). The borings were drilled using a truck-mounted hollow-stem auger drill rig to maximum depths of 18 feet (to the top of the water table). Soils were classified in accordance with the Unified Soil Classification System (USCS). The lithologic logs of the soil borings and a key to the USCS are presented in Appendix A. Soil samples were collected for lithologic characterization and chemical analysis at approximately 2-foot

intervals using a 2-inch diameter split spoon sampler lined with brass tubes. Samples were visually inspected and screened with an organic vapor monitor (OVM) for volatile organic vapors. The OVM field measurements are included on the boring logs in the Appendix. Following field screening, the sample tubes selected for chemical analysis were sealed with plastic caps, labelled and placed in a chilled cooler. Two samples from each boring were selected for chemical analysis from areas exhibiting elevated OVM readings. The samples were shipped to ATI for analysis of halogenated and aromatic VOCs using EPA Test Methods 8010 and 8020. The samples were also analyzed for total organic carbon (TOC). Analytical results are shown in Table 3. Copies of the laboratory analytical reports are included in Appendix C.

The laboratory analytical results indicate that perc was detected in the samples collected from Boring B9405 at depths of 3.5 feet and 5.5 feet at concentrations of 0.11 and 0.088 milligrams per kilogram (mg/kg), respectively. The extraction/monitoring well discussed below was installed at the same location as Boring B9405. No other 8010 or 8020 analytes were detected in any of the soil samples. TOC concentrations ranged from 0.02 to 0.12 percent.

Soil samples were previously collected in the vicinity of the Pier 1 Imports store in October 1991 (HLA, 1991). Analytical results from the October 1991 sampling indicated that perc was detected at concentrations ranging from 0.21 to 26,000 mg/kg. The highest concentrations were detected in a boring installed in approximately the same location as Boring B94-05, in the immediate vicinity of the former aboveground perc tank location (Plate 1). The sample collected in October 1991 at a depth of 5.5 feet contained perc at a concentration of 26,000 mg/kg. The sample collected in February 1994 at a depth of 5.5 feet contained perc at a concentration of 0.088 mg/kg. This significant reduction in perc concentrations indicates that the SVE system is operating as designed and is effective at reducing subsurface perc concentrations in soil.

4.1.3 Extraction Well Installation

One soil boring was drilled and completed as a well near the former aboveground tank location at the Pier 1 Imports store between February 24 and March 11, 1994, in accordance with procedures described in the Monitoring Well SAP (HLA, 1993b). The well location is shown on Plate 1. Initially, the well will be used for groundwater monitoring purposes, however, it was constructed so that it may be converted to an extraction well in the future, if appropriate.

The boring was drilled using cable tool methods. Drilling and well installation was conducted under the supervision of HLA and/or VW&R representatives. The boring was lithologically logged by an HLA geologist and a field log prepared. Soil cutting samples were collected at 5-foot intervals and/or at each observed change in lithology and were classified using ASTM D 2488-90, which is based on the Unified Soil Classification System. The boring log is included in Appendix A.

The vertical distribution of Perc was assessed by collecting groundwater samples in the boring. Chemical data from the boring was used to determine target depths for well completion. Target zones for collection of groundwater samples in the boring were at approximately 10-foot intervals throughout the boring. In-situ groundwater samples were collected during drilling using a Hydropunch™ sampler. Drilling proceeded to slightly above the target zone, the sampler was driven into the zone, and the sample inlet opened, allowing groundwater to flow into the sample chamber. Occasionally, lithologic conditions (e.g., the presence of gravel) prevented collection of groundwater samples with the Hydropunch sampler. At these locations, samples were collected by lowering a stainless steel bailer down the drill pipe to the bottom of the boring. The sampler or bailer was then brought to the surface and the sample poured from the sample chamber into a laboratory-provided volatile organic analysis (VOA) vial.

Groundwater samples were analyzed by Alchem Laboratory, Boise, Idaho, for halogenated VOCs using EPA Test Method 8010 on an expedited 24-hour turnaround basis. Laboratory analytical results are shown in Table 4. A copy of the laboratory analytical report is included in Appendix D. Detected perc concentrations ranged from 24 μ g/l to 20,400 μ g/l. Groundwater samples collected using a HydropunchTM sampler are more representative of a specific depth than are the samples collected using a bailer. The bailer samples likely represent an average of the chemical concentrations throughout the entire water column.

Although detected perc concentrations were above 5 μ g/l, drilling ceased at a depth of approximately 100 feet due to the presence of a lower permeability unit consisting of a sandy clay.

Well construction was a function of the detected perc concentrations. Because the highest perc concentrations were detected at a depth of 40 feet, a duel-screened interval was constructed with a 10-feet section of blank between the screened intervals. A straddle-packer will be installed within the 10-feet section of blank to prevent downward migration of the elevated concentrations of perc. Until the straddle-packer is received, a temporary device known as a well seal unit will serve to isolate the two screened intervals. Prior to well construction, construction details were discussed with and approved by the Department and the Idaho Department of Water Resources.

The well was constructed using an 8-inch-diameter wire-wrapped stainless steel casing and screen. A filter pack was placed adjacent to and slightly above the screened intervals. Well construction details are shown on the boring log and are included in Appendix A.

After well completion, the well was allowed to set for at least 24 hours and then developed. The well was developed by a combination of swabbing, surging, bailing and/or pumping. Groundwater samples will be collected from the well in accordance with procedures described in the QAPP (HLA, 1992b) during late March 1994. Upon receipt of the laboratory analytical report from the laboratory, a letter presenting the results will be forwarded to the Department.

All drilling fluids, cuttings, and well development fluids were contained and

temporarily stored onsite or at the VW&R field office pending the results of chemical analyses. Disposal methods will be evaluated based on the analytical results, as discussed in the QAPP (HLA, 1992b).

4.1.4 Soil Vapor Extraction System

The soil vapor extraction (SVE) system operated continuously between December 1993 and March 1994 with the exception of days the system was shut down to change out carbon due to breakthrough. To date, over 1,500 pounds of perc have been removed from the subsurface. Daily readings of the influent, effluent, mid-stream, and the three vapor monitoring wells continue to be made while the system is operating.

4.2 Work Planned for the Next Reporting Period

The Risk Assessment will be submitted to the Department in June 1994. The SVE system will be operated as designed and as specified in the operating permit.

5.0 SCHEDULE

A schedule for the Mall and PSA Order activities anticipated for the next quarter is shown in Table 5. The dates for completion of field activities are estimated and are dependent on access and subcontractor availability.

6.0 REFERENCES

Harding Lawson Associates, 1991. Soil Boring Investigation, Former VW&R Facility, Boise, Idaho. December 19.
, 1992a. Exhibit 3, Work Plan, Boise Towne Square Mall Supplemental Investigation and Final Remediation, Boise, Idaho. September 8.
, 1992b. Quality Assurance Project Plan, Boise Mall and Preliminary Study Area Work Plans, Boise, Idaho. November 2.
, 1993a. Affected Area, Boise Idaho. Letter to Ron Lane, Idaho Department of Health and Welfare Division of Environmental Quality. March 24.
, 1993b. Monitoring Well Sampling and Analysis Plan, Boise Towne Square Mall Order, Boise, Idaho. July 2.
, 1993c. Soil Boring Sampling and Analysis Plan, Preliminary Study Area, Boise, Idaho. August 13.
, 1993d. Risk Assessment Work Plan, Preliminary Study Area, Boise, Idaho. December 28.
, 1994. Statistical Approach, Boise Mall Order, Boise, Idaho. Letter to Ron Lane, Idaho Department of Health and Welfare, Division of Environmental Quality. January 5.

TABLES

Table 1. Quality Assurance Summary Quarterly Sampling Quarterly Progress Report, January-March 1994 Bolse, Idaho

Quality Control Sample	Acceptance Criterion ¹	Number of Analyses	Number of Analyses Within Acceptance Criterion	Percent of Analyses Within Acceptance		
FIELD						
Trip blank	No compounds detected	29	28	97%		
Field duplicate	100% RPD	58	58	100%		
LABORATORY						
Method Blank	No compounds detected	58	58	100%		
Matrix Spike	60-150%	12	12	100%		
Matrix Spike duplicate	60-150%	6	6	100%		
Surrogate Spike recovery	70-130%	19	19	97%		
Surrogate Spike recovery duplicate	70-130%	2	2	100%		

Overall Completeness: $\frac{183}{184} \times 100 = 99\%$

¹ Acceptance criterion specified in the QAPP (HLA, 1992b).

Table 2. Groundwater Analytical Results 2212 N. Sunrise Monitoring Well

Sample Number	Sample Date	Sample Type	Depth (Feet)	Perc (µg/l)	Other Detected 8010 Analytes (µg/l)
					
94022201	2/22/94	Hydropunch	20'	ND	ND
94022202	2/22/94	Hydropunch	30'	ND	ND
94022203	2/22/94	Hydropunch	30' (dup)	ND	ND
94022204	2/22/94	Hydropunch	40'	ND	ND
94022205	2/22/94	Hydropunch	50'	ND	ND
94022206	2/22/94	Trip Blank	NA	ND	ND
94080901	3/09/94	Well Sample	NA	0.3	ND
94030902	3/09/94	Well Sample (Dup)	NA	0.3	ND
		•	NA	ND	Chloroform: 0.4
94030903	3/09/94	Equip. Blank	INA	MD	GIIIOIOIOIIII. 3.1

ND: Well Sample: Not detected

Sample collected from Completed Well

NA:

μg/l:

Not Applicable

micrograms per liter

Table 3. Mail Soil Boring Results February 23, 1994

Sample Number	Depth (Feet)	Detected 8010 Analytes	Detected 8020 Analytes
B9401-04	9.5-10	ND	ND
B9401-05	11.5-12	ND	ND
B9402-02	5.5-6	ND	ND
B9402-06	13.5-4	ND	ND
B9403-03	6.5-7	ND	ND
B9403-04	9.5-10	ND	ND
B9404-03	7.5-8	ND	ND
B9404-05	11.5-12	ND	ND
B9405-01	3.5-4	Perc: 0.11	ND
B9405-02	5.5-6	Perc: 0.088	ND

ND:

Not detected

Results in: Milligrams per kilogram

Table 4. Groundwater Analytical Results Mail Extraction Well/Boring

Sample Number	Sample Date	Sample Type	Depth (Feet)	Perc (μg/l)	Other Detected 8010 Analytes
EW-1-20	02-27-94	Hydropunch	20	973	TCE-1.6
EW-1-40	03-01-94	Bailer	40 .	20,400	ND
EW-1-50	03-01-94	Hydropunch	50	440	ND
EW-1-60	03-02-94	Hydropunch	60	140	ND
EW-1-70	03-02-94	Hydropunch	70	423	ND
EW-1-80	03-03-94	Hydropunch	80	50.3	ND
EW-1-80	03-03-94	Bailer	80	2220	ND
EW-1-90	03-03-94	Bailer	90	1550	ND
EW-1-90	03-03-94	Hydropunch	90	233	ND
EW-1-95	03-03-94	Hydropunch	95	24	ND

Notes:

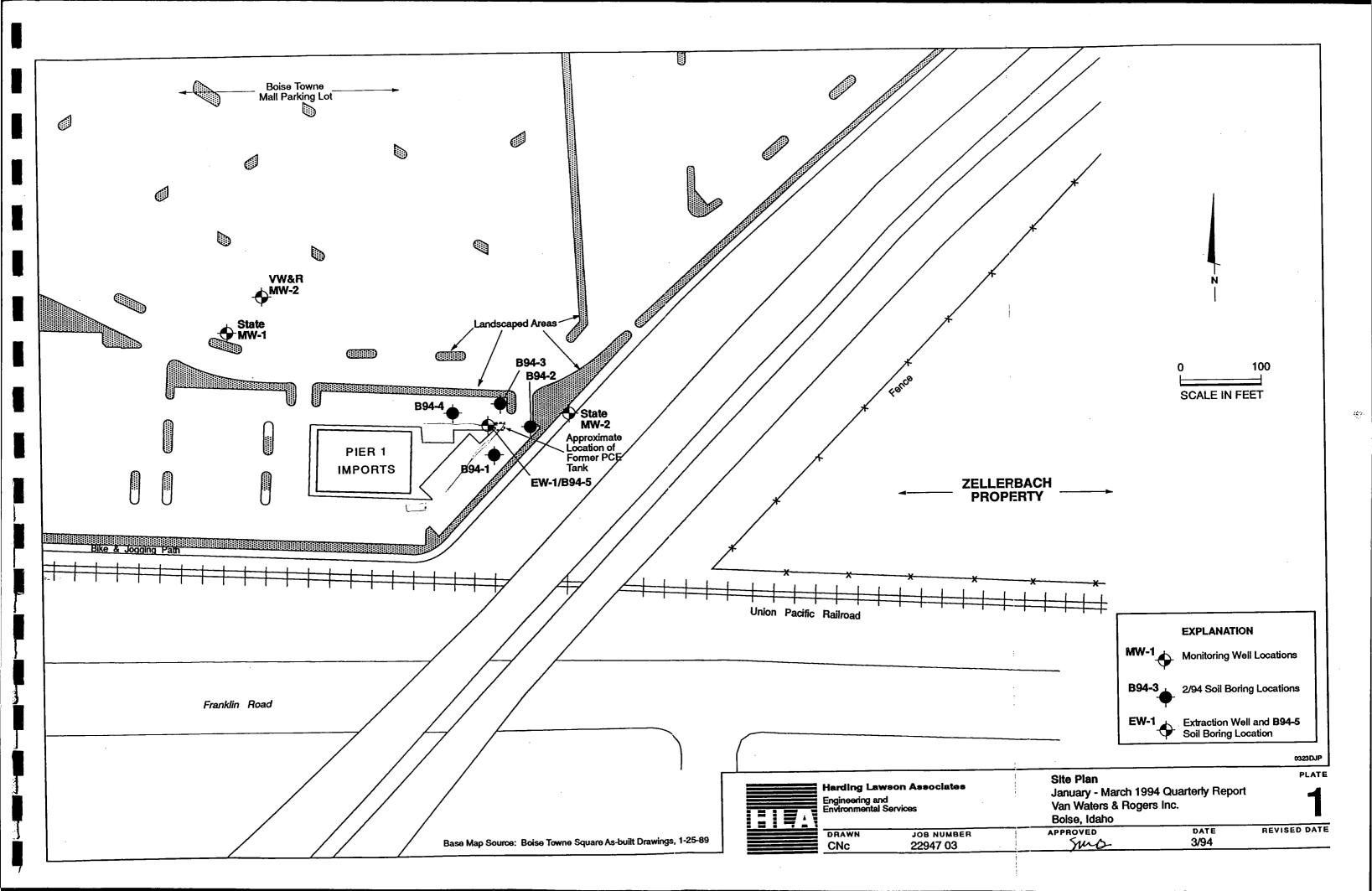
Micrograms per liter Not detected μ g/l:

ND: TCE: Trichloroethene

Table 5. Second Quarter 1994 Schedule

Order	Activity	Estimated Completion Date	Comments
Water Supply	Quarterly Sampling	mid May 1994	
Water Supply	Initiate well closure activities	April 1994	
PSA	Install two monitoring/ extraction wells along N. Five Mile Road	April 1994	Dependent on access and subcontractor availability
PSA	Geophysical SAP	May 1994	2 weeks following completion of monitoring/extraction wells
Mall	Monitor the SVE System	June 1994	
Mall	Submit Mall Risk Assessment Report	June 1, 1994	

PLATES

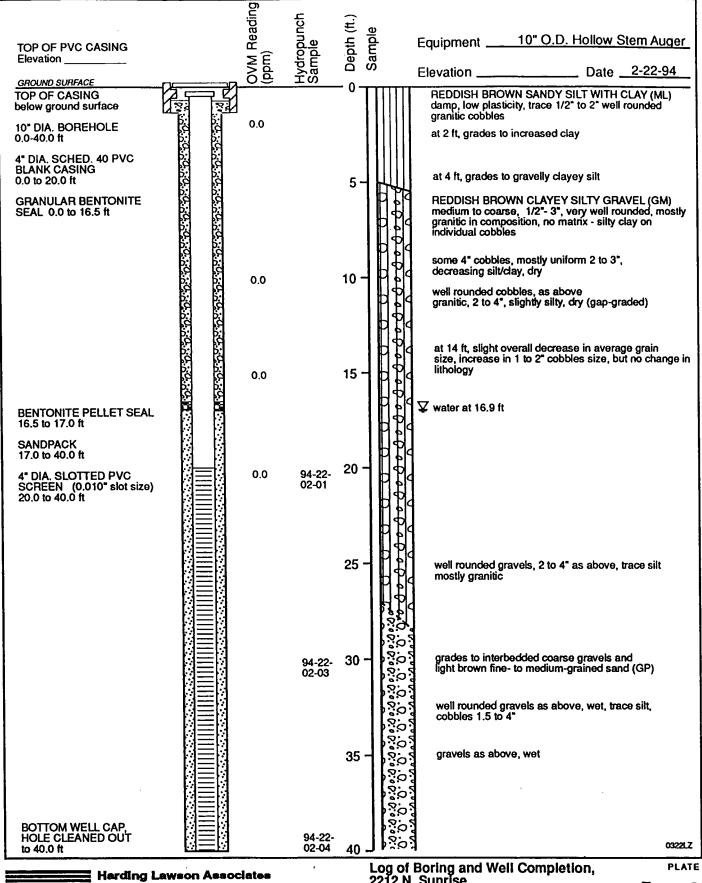


APPENDIX A BORING LOGS AND KEY TO THE UNIFIED SOIL CLASSIFICATION SYSTEM

APPENDIX A

LIST OF PLATES

- A1 Log of Boring and Well Completion Diagram 2212 N. Sunrise
- A2 Log of Boring B94-1
- A3 Log of Boring B94-2
- A4 Log of Boring B94-3
- A5 Log of Boring B94-4
- A6 Log of Boring B94-5
- A7 Log of Boring and Well Completion Diagram for EW-1
- A8 Key to Unified Soil Classification System

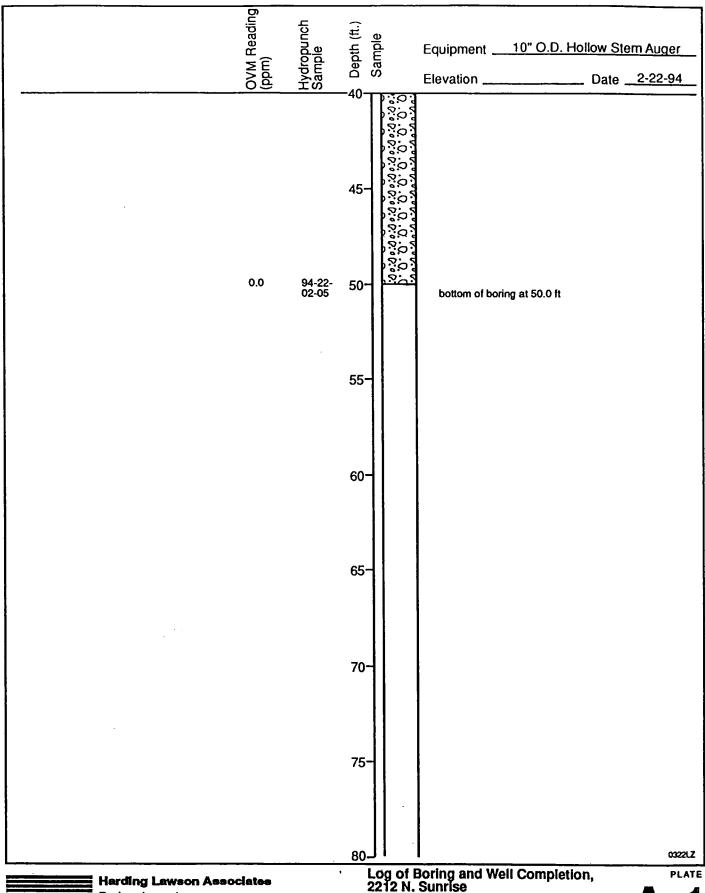




Engineering and **Environmental Services** Log of Boring and Well Completion, 2212 N. Sunrise January-March 1994 Quarterly Report Van Waters & Rogers Inc. Boise, Idaho

DRAWN JOB NUMBER LZc 20783 0032 APPROVED

REVISED DATE DATE 3/93





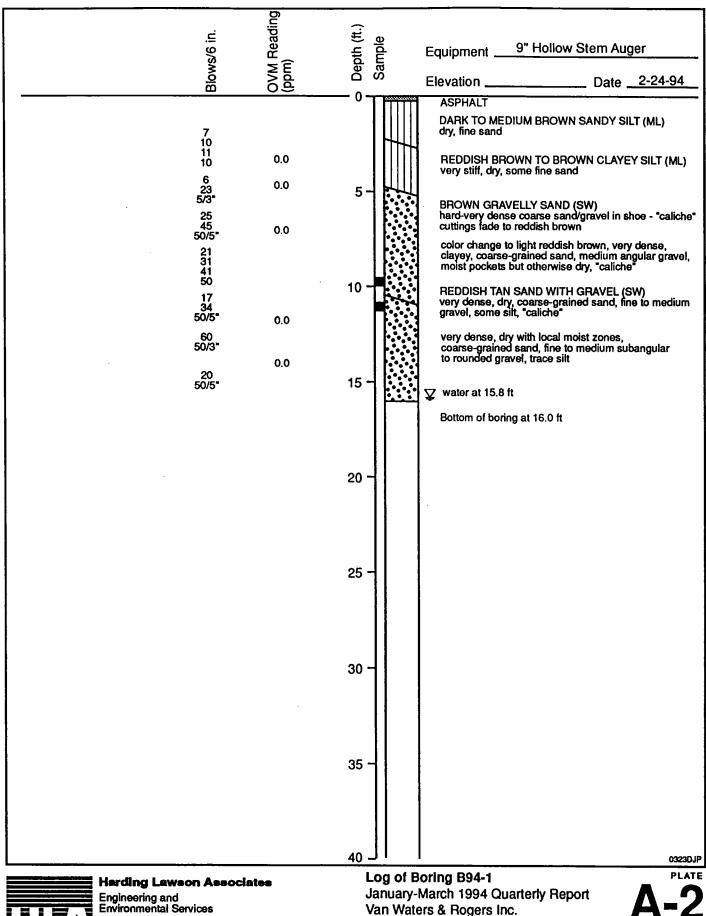
Engineering and Environmental Services Log of Boring and Well Completion, 2212 N. Sunrise January-March 1994 Quarterly Report Van Waters & Rogers Inc. Boise, Idaho

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APPROVED

DATE 3/93 REVISED DATE



Boise, Idaho

APPROVED

DATE

3/94

REVISED DATE



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JOB NUMBER

20786 0062

OVM Reading (ppm) Depth (ft.) Sample Blows/6 in. 9" Hollow Stem Auger Equipment Date __2-24-94 Elevation **ASPHALT** DARK GRAYISH BROWN SILTY CLAY 3 8 9 19 18 17 33 very stiff, dry to damp, trace coarse angular sand 0.0 0.0 5 BROWN SANDY GRAVEL (GW) dense to very dense, dry, angular, gravel soft, white, "caliche" REDDISH BROWN SANDY CLAYEY SILT (ML) hard, some weathered soft, white gravels as above REDDISH BROWN SILTY SAND WIITH GRAVEL (SM) dense, dry, coarse sand, some day 10 decreasing clay, tan to brown, gravels fine to coarse (to 4") 0.0 TAN SAND WITH GRAVEL (SW) very dense, fine to medium-grained sand, fine to coarse rounded gravel 0.0 15 becoming moist to wet 0.0 water at 17 ft Bottom of boring at 18.0 ft 20 25 30 35 0322LZ 40 PLATE Log of Boring B94-2 **Harding Lawson Associates** January-March 1994 Quarterly Report Engineering and Environmental Services Van Waters & Rogers Inc. Boise, Idaho

APPROVED

DATE

3/94

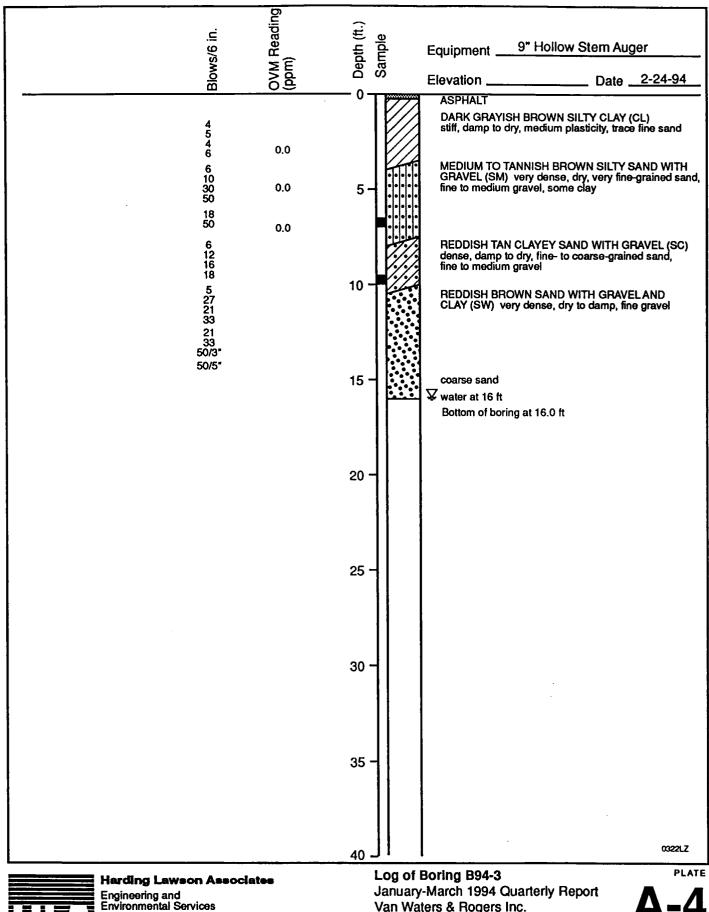
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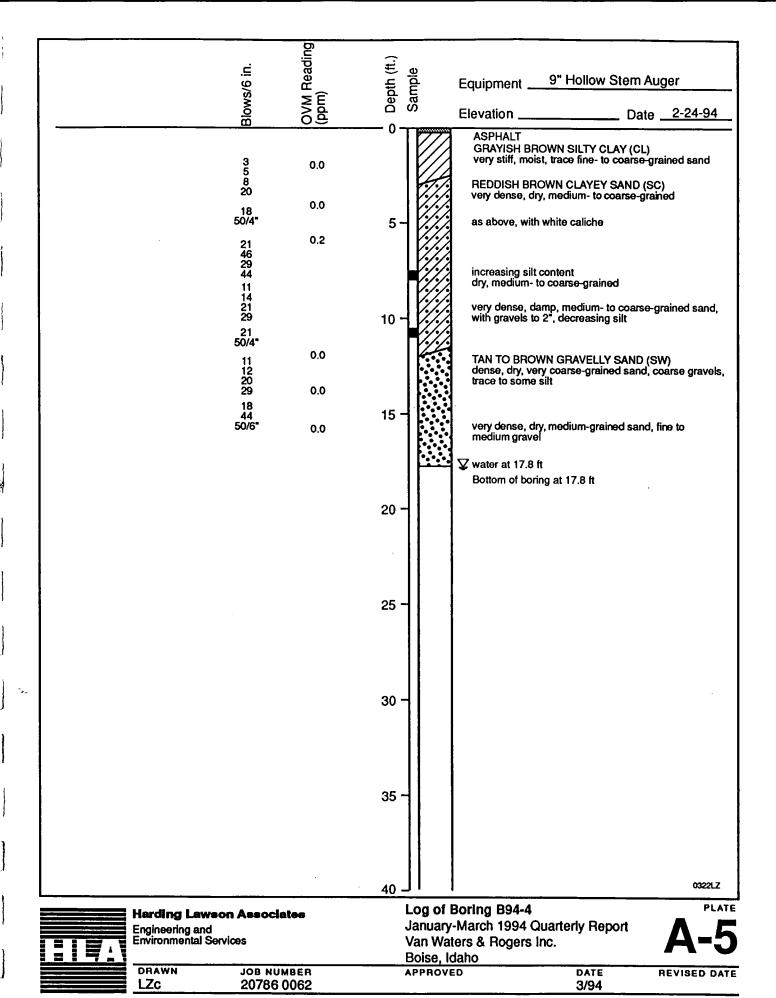
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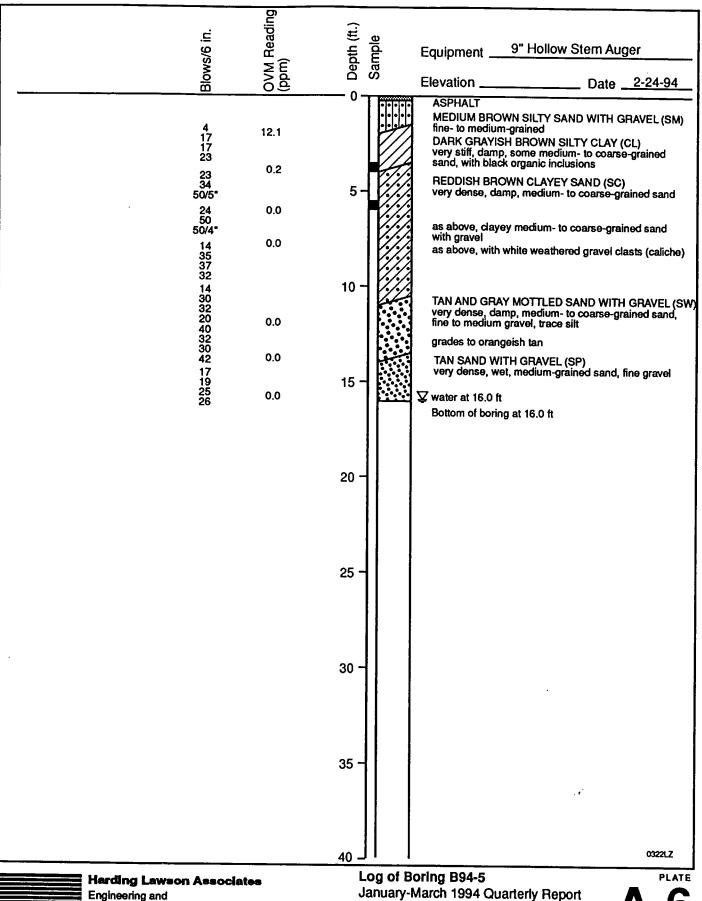
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DATE 3/94

REVISED DATE

Depth (ft.) Cable Tool Rig Equipment _ TOP OF PVC CASING Elevation _ Date <u>3-6-94</u> Elevation GROUND SURFACE TOP OF CASING at 0.5 ft ASPHALT below ground surface DARK GRAY SILTY CLAY (CL) some medium- to coarse-grained sand 12" DIA. BOREHOLE 0.0-101.0 ft 8-5/8" DIA. STAINLESS STEEL BLANK CASING REDDISH BROWN CLAYEY SAND (SC) some gravel 0.0 to 19.4 ft 5 PORTLAND TYPE I-II CEMENT-BENTONITE SEAL 0.0 to 14.0 ft 10 TAN AND GRAY MOTTLED SAND WITH GRAVEL (SW) sand medium- to coarse-grained, fine to medium gravel, trace silt TAN SAND WITH GRAVEL (SP) medium-grained, with some clay BENTONITE PELLET SEAL 14.0 to 16.0 ft 15 #8-12 SANDPACK 16.0 to 44.5 ft 8-5/8" DIA. SLOTTED STAINLESS STEEL SCREEN (0.020" slot size) 19.4 to 44.4 ft 20 25 30 hard-packed sand and gravel 35 40 -Log of Boring and Well Completion EW-1 PLATE **Harding Lawson Associates**



Engineering and Environmental Services

January-March 1994 Quarterly Report Van Waters & Rogers Inc.

Boise, Idaho

DATE

REVISED DATE

DRAWN JOB NUMBER LZc 20786 0062 APPROVED

3/94

OVM Reading (ppm) Depth (ft.) Sample Equipment __Cable Tool Rig Date <u>3-6-94</u> Elevation. 8-5/8" DIA. STAINLESS STEEL BLANK CASING 44.4 to 54.4 ft 45 PORTLAND TYPE I-II CEMENT-BENTONITE SEAL 44.5 to 49.0 ft LIGHT BROWN SAND (SP) #8-12 SANDPACK 49.0 to 86.0 ft coarse-grained, trace silt 50· 8-5/8" DIA. SLOTTED STAINLESS STEEL SCREEN (0.020" slot size) 54.4 to 79.4 ft 55-60. medium- to coarse-grained 65 SILTY SAND WITH GRAVEL (SM) coarse-grained, with well rounded medium gravel 70 75 8-5/8" DIA. STAINLESS STEEL SUMP 79.4 to 84.4 ft 80_ PLATE



Harding Lawson Associates

Engineering and **Environmental Services** Log of Boring and Well Completion EW-1 January-March 1994 Quarterly Report Van Waters & Rogers Inc. Boise, Idaho

DRAWN JOB NUMBER LZc 20786 0062

APPROVED

DATE 3/93 REVISED DATE

Depth (ft.) Sample Equipment __Cable Tool Rig Elevation. Date <u>3-6-94</u> 80 8-5/8" DIA. STEEL BLANK CASING 84.4 to 94.0 ft 85 PORTLAND TYPE I-II CEMENT-BENTONITE SEAL 86.0 to 95.0 ft sand fine-grained 90-YELLOWISH RED SAND (SP) medium-grained OPEN ENDED; NO BOTTOM CAP 95 INTERBEDDED CLAYEY SILT AND SAND (ML/SC) 100-BROWN SILTY CLAY (CL) some fine- to medium-grained sand 105-110-115-120-Log of Boring and Well Completion EW-1 PLATE **Harding Lawson Associates** January-March 1994 Quarterly Report Engineering and Environmental Services



Van Waters & Rogers Inc. Boise, Idaho

DRAWN JOB NUMBER LZc 20786 0062

APPROVED

DATE 3/94

REVISED DATE

	MAJOR DIVISIONS				TYPICAL NAMES
JLS SER		CLEAN GRAVELS WITH	GW	0.00 0.00 0.00	WITHOUT SAND, LITTLE OR NO FINES
	GRAVELS	LITTLE OR NO FINES	GP	20.00	POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
ED SC COAR	MORE THAN HALF COARSE FRACTION IS LARGER THAN	GRAVELS WITH OVER	GM		SILTY GRAVELS, SILTY GRAVELS WITH SAND
ALF IS	No. 4 SIEVE SIZE	15% FINES	GC		CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	CLEAN SANDS WITH		sw		WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
ORE T	SANDS	LITTLE OR NO FINES	SP		POORLY GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
ဗြ≊	MORE THAN HALF COARSE FRACTION IS SMALLER THAN	SANDS WITH OVER 15% FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
	No. 4 SIEVE SIZE		sc		CLAYEY SANDS WITH OR WITHOUT GRAVEL
N.E.	SILTS AND CLAYS		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
D SOILS FISFINER SIEVE			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
			OL		ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
GRA	SILTS AND CLAYS		мн		INORGANIC SILTS, MICACEOUS OR DIATOMACIOUS, FINE SANDY OR SILTY SOILS, ELASTIC SILTS
FINE-GRAII MORE THAN I			СН		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
	LIQUID LIMI	I GREATER TRANSUM	ОН		ORGANIC SILTS OR CLAYS OF MEDIUM TO HIGH PLASTICITY
	HIGHLY ORGANIC SOILS			*****	PEAT AND OTHER HIGHLY ORGANIC SOILS

SYMBOLS KEY

Bulk or Classification Sample Sample preserved for possible laboratory analysis Hydropunch sample First-encountered groundwater level Static groundwater level (10YR 4/4) - Munsell soil color – 1990 edition NA - Not available ND - Not detected

GRAIN SIZE CHART

	Range of Grain Sizes		
Classification	U.S. Standard Sieve Size	Grain Size in Millimeters	
BOULDERS	ABOVE 12"	ABOVE 305	
COBBLES	12" To 3"	305 to 76.2	
GRAVEL coarse fine	3" To No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.75 76.2 to 19.1 19.1 to 4.75	
SAND coarse medium fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.75 to 0.075 4.75 to 2.00 2.00 to 0.425 0.425 to 0.075	
SILT & CLAY	Below No. 200	Below 0.075	

Source: ASTM D 2488-90, based on Unified Soil Classification System.



Harding Lawson Associates

Engineering and Environmental Services

Key to Unified Soll Classification System January-March 1994 Quarterly Report Van Waters & Rogers Inc. Boise, Idaho

8-A

PLATE

DRAWN JOB NUMBER LZC 20786 0062 APPROVED

DATE 3/94 REVISED DATE

APPENDIX B

LABORATORY ANALYTICAL REPORTS FOR 2212 N. SUNRISE



104 West 31st Street Boise, Idaho 83714 Phone (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Soll Analysis

LABORATORY REPORT

VAN WATERS & ROGERS

2723 S. COLE RD.

BOISE, IDAHO

83709

DATE COLLECTED: 02/22/94

TIME COLLECTED: 12:45

DATE RECEIVED: 02/22/94

DATE REPORTED: 02/23/94 SUBMITTED: MICHELLE BEEKMAN

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR-PSA, BOISE / JN #20783.0032 / WATER

SOURCE-: 94022201-20'

LAB SAMPLE NUMBER - 50468

LABORATORY REPORT FOR *PURGABLE HALOCARBONS BY 8010*

COMPOUND	METHOD DETECTION LEVEL (ug/l)	ANALYTICAL RESULTS
REGULATED VOC'S (DRINKING WATER)		
Vinyl Chloride	0.2	* ND
1,1-Dichloroethylene	0.5 0.5	ND ND
1,1,1-Trichlorethane Carbon Tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
p-Dichlorobenzene	0.5	· ND
Chlorobenzene	0.5	ND
o-Dichlorobenzene	0.5	ND
cis-1,2-Dichloroethene	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ИD
Methylene Chloride	0.5	ND
Tetrachloroethene	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
1, 1, 2-Trichloroethane	0.5	ND

Date Analyzed: 02/22/94 * ND = None Detected

Analyst: BRAD BROKER

REPORT CONT. NEXT PAGE

Suzanne Howell, Laboratory Manager



104 West 31st Street Bolse, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soll Analysis

REPORT CONTINUED "Lab No. 50468" PAGE 2

Lab No. 50468 PAGE 2

COMPOUND	METHOD DETECTIONLEVEL (ug/l)	ANALYTICAL RESULTS	
THM'S (TRIHALOMETHANES)			
Bromodichloromethane	0.2	*ND	
Chlorodibromomethane	0.5	ND	
Bromoform	1.0	ND	
Chloroform	0.2	ND	

UNREGULATED VOC'S (DRINKING WATER)

COMPOUND	METHOD DETECTION	ANALYTICAL
CONFOUND	LEVEL (ug/l)	RESULTS (ug/L)
Bromobenzene	0.5	*ND
Bromochloromethane	0.5	ND
Bromomethane	2.0	ИD
Chloroethane	1,0	ND
Chloromethane	0.5	ND
2-Chlorotoluene	0.5	ND
4-Chlorotoluene	0.5	ND
1,2-Dibromo-3-Chloropropane	5.0	ND
1,2-Dibromoethane	1.5	ND
Dibromomethane	4.0	ND
Dichlorodifluoromethane	0.5	ND
1,1-Dichloroethane	0.5	ND
1,3-Dichloropropane	0.5	ND
2,2-Dichloropropane	0.5	ND
1,1-Dichloropropene	0.5	ND
Hexachlorobutadiene	0.5	ND
1, 1, 1, 2-Tetrachloroethane	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
Toluene	0.5	ND
1,2,3-Trichlorobenzene	0.5	ND
Trichlorofluoromethane	0.5	ND
1,2,3-Trichloropropane	0.5	ND
		· -

* ND. = None Detected

CLEENT: VAN WATERS & ROGERS INC. / ATTN: MIKE GAUDETTE



104 West 31st Street Boise, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soll Analysis

LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD. BOISE, IDAHO

83709

DATE COLLECTED: 02/22/94

TIME COLLECTED: 13:30 DATE RECEIVED: 02/22/94 DATE REPORTED: 02/23/94

SUBMITTED: MICHELLE BEEKMAN

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR-PSA, BOISE / JN #20783.0032 / WATER

SOURCE-: 94022202-30'

LAB SAMPLE NUMBER - 50469

LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010"

COMPOUND	METHOD DETECTION	ANALYTICAL
, <u>sam sonb</u>	LEVEL (ug/1)	RESULTS
REGULATED VOC'S (DRINKING WATER)	•	
Vinyl Chloride 1,1-Dichloroethylene	0.2	* ND
1,1,1-Trichlorethane	0.5	ND
Carbon Tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
p-Dichlorobenzene	0.5	ND
Chlorobenzene	0.5	ND
o-Dichlorobenzene	0.5	ND
cis-1, 2-Dichloroethene	0.5	ND
trans-1, 2-Dichloroethene	0.5	ND
1 2-Dichioroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
Methylene Chloride	0.5	ND
Tetrachloroethene	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
=======================================	=======================================	

Date Analyzed: 02/22/94

* ND = None Detected

Analyst: BRAD BROKER

PORT CONT. NEXT PAGE

Suzanne Howell, Laboratory Manager



104 West 31st Street Bolse, Idaho 83714

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Water, Waste Water and Soil Analysis

REPORT CONTINUED

"Lab No. 50469"

PAGE 2

COMPOUND	METHOD DETECTION LEVEL (uq/1)	ANALYTICAL RESULTS
THM'S (TRIHALOMETHANES)		
Bromodichloromethane Chlorodibromomethane	0.2 0.5	*ND
Bromoform Chloroform	1.0 0.2	ND ND

UNREGULATED VOC's (DRINKING WATER)

COMPOUND	METHOD DETECTIONLEVEL (ug/1)	ANALYTICAL RESULTS (ug/L)
Bromobenzene	0.5	- UD
Bromochloromethane	0.5	*ND
Bromomethane	2.0	ND
Chloroethane	1.0	ND
Chloromethane	0.5	ND
2-Chlorotoluene	0.5	ND
4-Chlorotoluene	0.5	ND
1,2-Dibromo-3-Chloropropane	5.0	ND
1,2-Dibromoethane	1.5	ND
Dibromomethane	4.0	ND
Dichlorodifluoromethane		ND
1,1-Dichloroethane	0.5 0.5	ND
1,3-Dichloropropane		ND
2, 2-Dichloropropane	0.5	ND
1,1-Dichloropropene	0.5	ND
Hexachlorobutadiene	0.5	ND
1, 1, 1, 2-Tetrachloroethane	0.5	ND
1, 1, 2, 2-Tetrachloroethane	0.5	ИD
Toluene	0.5	ND
1, 2, 3-Trichlorobenzene	0.5	ND
Trichlorofluoromethane	0.5	ND
1, 2, 3-Trichloropropane	0.5	ND
x, z, o it rentot obt obane	0.5	ND

* ND = None Detected

CLEENT: VAN WATERS & ROGERS INC. / ATTN: MIKE GAUDETTE



104 West 31st Street Boise, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

METHOD DETECTION

Water, Waste Water. and Soil Analysis

LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD. BOISE, IDAHO

83709

DATE COLLECTED: 02/22/94 TIME COLLECTED: 13:40

DATE RECEIVED: 02/22/94
DATE REPORTED: 02/23/94

SUBMITTED: MICHELLE BEEKMAN

ANALYTICAL

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR-PSA, BOISE / JN #20783.0032 / WATER

SOURCE -: 94022203-35' - DUP OF 30'

LAB SAMPLE NUMBER - 50470

LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010"

COMPOUND		LEVEL (ug/1)	RESULTS	
RE	EGULATED VOC'S (DRINKING WATER)			
	Vinyl Chloride	0, 2	* ND	
	1,1-Dichloroethylene	0.5	ND	
	1,1,1-Trichlorethane	0.5	ND	
	Carbon Tetrachloride	0.5	ND	
	1,2-Dichloroethane	0.5	ND	
	Trichloroethylene	0.5	ND	
· .	p-Dichlorobenzene	0.5	ND .	
	Chlorobenzene	0.5	ND	
	o-Dichlorobenzene	0.5	ND	
	cis-1,2-Dichloroethene	0.5	ND	
	trans-1,2-Dichloroethene	0.5	ND	
	1,2-Dichloropropane	0.5	ND	
	Methylene Chloride	0.5	ND	
	Tetrachloroethene	0.5	ND	
	1,2,4-Trichlorobenzene	0.5	ND	
	1,1,2-Trichloroethane	0.5	ND	`
D-		=======================================		==

Date Analyzed: 02/22/94 * ND = None Detected

Analyst: BRAD BROKER

PORT CONT. NEXT PAGE

Suzanne Howell, Laboratory Manager



104 West 31st Street Bolse, Idaho 83714

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METHOD DETECTION

Water, Waste Water and Soil Analysis

REPORT CONTINUED "Lab No. 50470"

PAGE 2

COMPOUND	METHOD DETECTION LEVEL (ug/1)	ANALYTICAL RESULTS
THM'S (TRIHALOMETHANES)		
Bromodichloromethane	0.2	*ND
Chlorodibromomethane	0. 5	ND
Bromoform	1.0	ND
Chloroform	0.2	ND

UNREGULATED VOC'S (DRINKING WATER)

	METHOD DETECTION	ANALYTICAL
COMPOUND	LEVEL (ug/1)	RESULTS (ug/L)
Bromobenzene	0.5	*ND
Bromochloromethane	0.5	ND
Bromomethane	2.0	ND
Chloroethane	1.0	ND
Chloromethane	0.5	ND
2-Chlorotoluene	0.5	ND
4-Chlorotoluene	0.5	ND
1,2-Dibromo-3-Chloropropane	5.0	ND
1,2-Dibromoethane	1.5	ND
Dibromomethane	4.0	ND
Dichlorodifluoromethane	0.5	ND
1,1-Dichloroethane	0.5	ND
1,3-Dichloropropane	0.5	ND
2,2-Dichloropropane	0.5	ND
1,1-Dichloropropene	0.5	ND
Hexachlorobutadiene	0.5	ND
1, 1, 1, 2-Tetrachloroethane	0.5	ND
1, 1, 2, 2-Tetrachloroethane	0.5	ND
Toluene	0.5	ND .
1,2,3-Trichlorobenzene	0.5	ND /
Trichlorofluoromethane	0.5	ND
1,2,3-Trichloropropane	0.5	ND

* ND = None Detected

VAN WATERS & ROGERS INC. / ATTN: MIKE GAUDETTE



104 West 31st Street Boise, Idaho 83714

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Water, Waste Water and Soil Analysis

LABORATORY REPORT

VAN WATERS & ROGERS

2723 S. COLE RD. BOISE, IDAHO

83709

DATE COLLECTED: 02/22/94

TIME COLLECTED: 14:20

DATE RECEIVED: 02/22/94

DATE REPORTED: 02/23/94 SUBMITTED: MICHELLE BEEKMAN

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR-PSA, BOISE / JN #20783.0032 / WATER

SOURCE -: 94022204-40'

LAB SAMPLE NUMBER - 50494

LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010"

COMPOUND		METHOD DETECTIONLEVEL (ug/1)	ANALYTICAL RESULTS
:	REGULATED VOC'S (DRINKING WATER)		
	Vinyl Chloride	0.2	* ND
	1,1-Dichloroethylene	0.5	ИD
	1,1,1-Trichlorethane	0.5	ND
	Carbon Tetrachloride	0.5	ND
	1,2-Dichloroethane	0.5	ND
	Trichloroethylene	0.5	ND
	p-Dichlorobenzene	0.5	. ND
	Chlorobenzene	0.5	ND
	o-Dichlorobenzene	0.5	ND
	cis-1,2-Dichloroethene	0.5	ND
	trans-1,2-Dichloroethene	0.5	ND
	1,2-Dichloropropane	0.5	ND
	Methylene Chloride	0.5	ND
	Tetrachloroethene	0.5	ND
	1,2,4-Trichlorobenzene	0.5	ND
	1,1,2-Trichloroethane	0.5	ND
	======================================		=======================================

Date Analyzed: 02/22/94 * ND = None Detected

Analyst: BRAD BROKER

ORT CONT. NEXT PAGE

Laboratory Manager



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Water, Waste Water and Soll Analysis

REPORT CONTINUED "Lab No. 50494" PAGE 2

REPORT CONTINUED "Lab No. 50494" PAGE 2

COMPOUND	METHOD DETECTION LEVEL (ug/1)	ANALYTICAL RESULTS	
THM'S (TRIHALOMETHANES)			
Bromodichloromethane	0.2	*ND	
Chlorodibromomethane	0.5	ND	
Bromoform	1.0	ND	
Chloroform	0.2	ND	

UNREGULATED VOC'B (DRINKING WATER)

	METHOD DETECTION	ANALYTICAL
COMPOUND	LEVEL (ug/1)	RESULTS (ug/L)
Bromobenzene	0.5	*ND
Bromochloromethane	0.5	ND
Bromomethane	2.0	ИD
Chloroethane	1.0	ND
Chloromethane	0.5	ND
2-Chlorotoluene	0.5	ND
4-Chlorotoluene	0.5	ND
1,2-Dibromo-3-Chloropropane	5.0	ND
1,2-Dibromoethane	1.5	ИD
Dibromomethane	4.0	ND
Dichlorodifluoromethane	0.5	ND
1,1-Dichloroethane	0.5	ИD
1,3-Dichloropropane	0.5	ИD
2,2-Dichloropropane	0.5	ND
1,1-Dichloropropene	0.5	ND
Hexachlorobutadiene	0.5	ND
1,1,1,2-Tetrachloroethane	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
Toluene	0.5	ND.
1,2,3-Trichlorobenzene	0.5	ND /
Trichlorofluoromethane	0.5	ND
1,2,3-Trichloropropane	0.5	ND

* ND = None Detected

CLIENT: VAN WATERS & ROGERS INC. / ATTN: MIKE GAUDETTE



104 West 31st Street Boise, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

VERMOR REPROPERTY

Water, Waste Water and Soil Analysis

LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD.

BOISE, IDAHO

83709

DATE COLLECTED: 02/22/94

TIME COLLECTED: 16:00 DATE RECEIVED: 02/22/94

DATE REPORTED: 02/23/94

SUBMITTED: MICHELLE BEEKMAN

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR-PSA, BOISE / JN #20783.0032 / WATER

SOURCE-: 94022205-50'

LAB SAMPLE NUMBER - 50495

LABORATORY REPORT FOR *PURGABLE HALOCARBONS BY 8010*

COMPOUND	METHOD DETECTION LEVEL (uq/l)	ANALYTICAL RESULTS	
REGULATED VOC'S (DRINKING WATER)			
Vinyl Chloride	0.2	* ND	
1,1-Dichloroethylene	0.5	ND	
1,1,1-Trichlorethane	0.5	ND	
Carbon Tetrachloride	0.5	ND	
1,2-Dichloroethane	0.5	ND	
Trichloroethylene	0.5	ND	
p-Dichlorobenzene	0.5	ND	
Chlorobenzene	0.5	ND	
o-Dichlorobenzene	0.5	ND	
cis-1,2-Dichloroethene	0.5	ND	
trans-1,2-Dichloroethene	0.5	ND	
1,2-Dichloropropane	0.5	ND	
Methylene Chloride	0, 5	ND	
Tetrachloroethene	0.5	ND	
1,2,4-Trichlorobenzene	0.5	ND	
1,1,2-Trichloroethane	0.5	ND ,	
	=======================================	:======================================	

Date Analyzed: 02/22/94 • ND = None Detected

Analyst: BRAD BROKER

PORT CONT. NEXT PAGE

Howell, Laboratory Manager



104 West 31st Street Boise, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soil Analysis

REPORT CONTINUED

Lab No. 50495

PAGE 2

COMPOUND	METHOD DETECTION LEVEL (ug/1)	ANALYTICAL RESULTS
THM'S (TRIHALOMETHANES)		
Bromodichloromethane Chlorodibromomethane Bromoform Chloroform	0.2 0.5 1.0 0.2	#ND ND ND ND

UNREGULATED VOC's (DRINKING WATER)

COMBOUND	METHOD DETECTION	ANALYTICAL
COMPOUND	LEVEL (uq/1)	RESULTS (ug/L)
Bromobenzene	0.5	
Bromochloromethane	0.5	*ND
Bromomethane	0.5	ND
	2.0	ND
Chloroethane	1.0	ИD
Chloromethane	0.5	ND
2-Chlorotoluene	0.5	ND
4-Chlorotoluene	0.5	ИD
1,2-Dibromo-3-Chloropropane	5.0	ND
1,2-Dibromoethane	1.5	ND
Dibromomethane	4.0	ND
Dichlorodifluoromethane	0.5	
1,1-Dichloroethane	0.5	ND
1,3-Dichloropropane	0.5	ND
2,2-Dichloropropane	0.5	ИД
1,1-Dichloropropene		ND
Hexachlorobutadiene	0.5	ND
1, 1, 1, 2-Tetrachloroethane	0.5	ND
1, 1, 2, 2-Tetrachloroethane	0.5	ND
Toluene	0.5	ИD
	0.5	ND ,
1, 2, 3-Trichlorobenzene	0.5	ND
Trichlorofluoromethane	0.5	ND
1,2,3-Trichloropropane	0.5	ND

* ND = None Detected

CLIENT: VAN WATERS & ROGERS INC. / ATTN: MIKE GAUDETTE



104 West 31st Street Boise, Idaho 83714 Phone (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Soll Analysis

LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD.

BOISE, IDAHO

83709

DATE COLLECTED: 02/22/94
TIME COLLECTED: 16:15
DATE RECEIVED: 02/22/94
DATE REPORTED: 02/23/94

SUBMITTED: MICHELLE BEEKMAN

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR-PSA, BOISE / JN #20783.0032 / WATER

SOURCE-: 94022206-TB

LAB SAMPLE NUMBER - 50496

LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010"

COM	POUND	METHOD DETECTION LEVEL (uq/1)	ANALYTICAL RESULTS
R	EGULATED VOC'S (DRINKING WATER)		
	Vinyl Chloride	0.2	* ND
	1,1-Dichloroethylene	0.5	ND
	1,1,1-Trichlorethane	0.5	ND
	Carbon Tetrachloride	0.5	ND
	1,2-Dichloroethane	0.5	ND
	Trichloroethylene	0.5	ND
	p-Dichlorobenzene	0.5	ND
	Chlorobenzene	0.5	ND
	o-Dichlorobenzene	0.5	ND
	cis-1,2-Dichloroethene	0.5	ND
	trans-1, 2-Dichloroethene	0.5	ND
	1,2-Dichloropropane	0.5	ND
	Methylene Chloride	0.5	ND
	Tetrachloroethene	0.5	ND
	1,2,4-Trichlorobenzene	0.5	ND
	1,1,2-Trichloroethane	0.5	ND
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Date Analyzed: 02/22/94 + ND = None Detected

Analyst: BRAD BROKER

REPORT CONT. NEXT PAGE

Suzanne Howell, Laboratory Manager



104 West 31st Street Bolse, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soil Analysis

المناشفة فستهيئ والبرازو وساسان والمدور

REPORT CONTINUED

"Lab No. 50496"

COMPOUND	METHOD DETECTIONLEVEL (uq/l)	ANALYTICAL RESULTS
THM'S (TRIHALOMETHANES)		
Bromodichloromethane Chlorodibromomethane Bromoform Chloroform	0.2 0.5 1.0 0.2	*ND ND ND ND

UNREGULATED VOC'S (DRINKING WATER)

	METHOD DETECTION	ANALYTICAL
COMPOUND	LEVEL (ug/1)	RESULTS (ug/L)
Bromobenzene	0.5	*ND
Bromochloromethane	0.5	ND
Bromomethane	2.0	ND
Chloroethane	1.0	ND
Chloromethane	0.5	ND
2-Chlorotoluene	0.5	ND
4-Chlorotoluene	0.5	ИD
1,2-Dibromo-3-Chloropropane	5.0	ND
1,2-Dibromoethane	1.5	ИD
Dibromomethane	4.0	ИD
Dichlorodifluoromethane	0.5	ИD
1,1-Dichloroethane	0.5	ND
1,3-Dichloropropane	0.5	ИD
2, 2-Dichloropropane	0.5	ND
1,1-Dichloropropene	0.5	ND
Hexachlorobutadiene	0.5	ИD
1, 1, 1, 2-Tetrachloroethane	0.5	ND
1, 1, 2, 2-Tetrachloroethane	0.5	ND
Toluene	0.5	. ND
1, 2, 3-Trichlorobenzene	0.5	ИD
Trichlorofluoromethane	0.5	ND
1, 2, 3-Trichloropropane	0.5	ИД

* ND = None Detected

CLEENT: VAN WATERS & ROGERS INC. / ATTN: MIKE GAUDETTE

1325 Fourth Avenue, Suite 1800 Seattle, WA 98101 (206) 622-0812 (208) 292-8619 Telecopy

CHAIN OF CUSTODY FORM

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Lab:	Alchem

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Job Number: 20783,0032	
Name/Location:	
Project Manager: M. Beekman	



Samplers: Beth Griger

Lab: All Chem

RECEIVED FOR LAB BY:

DATE/TIME

ANALYSIS REQUESTED

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CLIENT I.D. : METHOD BLANK MPLE MATRIX : WATER - A METHOD : 8010	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTO	: N/A : N/A : 03/15/94 - : ug/L-
MPOUNDS	RESULTS	,
CARBON TETRACHLORIDE **HLOROBENZENE* **ILOROFTHANE* **ALOROFORM* CHLOROMETHANE* (2-DIBROMOETHANE (EDB) (2-DICHLOROBENZENE* 1,3-DICHLOROBENZENE* 1,4-DICHLOROBENZENE* 1,4-DICHLOROETHANE* 1,2-DICHLOROETHANE* 1,2-DICHLOROETHENE* IS-1,2-DICHLOROETHENE* **RANS-1,2-DICHLOROETHENE* 1,2-DICHLOROPROPENE* RANS-1,3-DICHLOROPROPENE* RANS-1,3-DICHLOROPROPENE* **RICHLOROETHANE* 1,1,2-TETRACHLOROETHANE* 1,1,1-TRICHLOROETHANE* 1,1,2-TRICHLOROETHANE* **TRICHLOROETHANE* **TRICHLOROETHANE* **TRICHLOROETHANE* **TRICHLOROFLUOROMETHANE* **TRICHLOROFLUOR	<pre><0.2 <1.0 <0.2 <0.5 <1.0 <0.5 <0.5 <0.5 <0.5 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2</pre>	
SURROGATE PERCENT RECOVERY	95 🛫	LIMITS 58-126
ROMOCHLOROMETHANE	,,,	~~ #==
Analyst Date 3/694 Page I Date 3/694	Sample File	: R3151H08 /

A METHOD : 8010 /	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTOR	: 03/10/94 : N/A : 03/15/94- : ug/L -
MPOUNDS	RESULTS	
BROMODICHLOROMETHANE OMOFORM OMOMETHANE CARBON TETRACHLORIDE LOROETHANE LOROFORM CHLOROMETHANE 2-DIBROMOETHANE (EDB) 2-DICHLOROBENZENE 1,3-DICHLOROBENZENE BROMOCHLOROMETHANE 1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,2-DICHLOROETHENE LANS-1,2-DICHLOROETHENE LANS-1,2-DICHLOROETHENE 1,2-DICHLOROPROPANE 1,2-DICHLOROPROPENE LANS-1,3-DICHLOROPROPENE LANS-1,3-DICHLOROPROPENE LATTYLENE CHLORIDE 1,1,2,2-TETRACHLOROETHANE 1,1-TRICHLOROETHANE 1,1-TRICHLOROETHANE 1,1-TRICHLOROETHANE	<0.2 <0.2 <1.0 <0.2 <0.5 <1.0 <0.5 <0.5 <0.5 <0.5 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2	LIMITS
Analyst 72 Date 3116(9) Page 1 Paviewer Date 3/18/94	Sample File :	R3151H10 —

CVIENT : VAN WATERS & ROGERS OJECT # : BOISE OJECT NAME : VWR BOISE CLIENT I.D. : 94030902 SAMPLE MATRIX : WATER A METHOD : 8010	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTOR	: 03/15/94 : ug/L
MPOUNDS	RESULTS	
CARBON TETRACHLORIDE CHLOROBENZENE LOROFTHANE LOROFORM CHLOROMETHANE 1 2-DIBROMOETHANE (EDB) 2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE BROMOCHLOROMETHANE 1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,2-DICHLOROETHENE 1,2-DICHLOROETHENE 1,2-DICHLOROETHENE 1,2-DICHLOROPROPENE LANS-1,2-DICHLOROPROPENE LANS-1,3-DICHLOROPROPENE LANS-1,3-DICHLOROPROPENE LETHYLENE CHLORIDE	<pre><0.2 <1.0 <0.2 <1.0 <0.5 <1.0 <0.2 <0.5 <0.5 <0.5 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2</pre>	
		IMITS 8-126
PCE confined RJ161814_	-	
Analyst h Date 2/6/54 Page 1 Peviewer Date 3/8/94	Sample File :	R3151H13~

: VAN WATERS & ROGERS OJECT # : BOISE CLIENT I.D. : 94030903 MPLE MATRIX : WATER A METHOD : 8010	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTO	: 03/10/94 : N/A : 03/15/94— : ug/L—
MPOUNDS	RESULTS	
CARBON TETRACHLORIDE YLOROBENZENE LOROETHANE LOROFORM CHLOROMETHANE (EDB) 2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE BROMOCHLOROMETHANE 1,2-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHENE 1,2-DICHLOROETHENE 1,2-DICHLOROETHENE 1,2-DICHLOROETHENE 1,2-DICHLOROPROPENE 1,2-DICHLOROPROPENE 1,2-DICHLOROPROPENE 1,2-DICHLOROPROPENE 1,2-TETRACHLOROETHANE	<0.2 <1.0 <0.2 <0.5 <1.0 <0.5 <1.0 <0.5 <0.5 <0.5 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2	
SURROGATE PERCENT RECOVERY		LIMITS
Chloropun continued 23161515	100 ==	58-126
Analyst Date Tholay Page 1 Peviewer Date Date Date	Sample File	: R3151H14

VOLATILE ORGANICS ANALYSIS QUALITY CONTROL DATA

CLIENT : VAN WATERS & ROGERS
ROJECT # : BOISE
LOJECT NAME : VWR BOISE
SAMPLE MATRIX : WATER

FPA METHOD : 8010

SAMPLE I.D. # : BLANK

DATE EXTRACTED : N/A DATE ANALYZED : 03/15/94 UNITS : ug/L

MPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
LOROBENZENE 1-DICHLOROETHENE TRICHLOROETHENE	<0.500 <0.200 <0.200	8.00 8.00 8.00	7.40 7.29 7.64	93 91 96	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A
CONTROL LIMITS				% REC.			RPD
CHLOROBENZENE 11-DICHLOROETHENE ICHLOROETHENE				79 - 14 56 - 15 72 - 13	8		33 22 21
SURROGATE RECOVERIES		SPIKE		DUP. SF	IKE	LIMITS	
OMOCHLOROMETHANE		99		N/A		58 - 12	6

nalyst 72 Date 3/18/94
Reviewer 10 Date 3/18/94

Page 1

Sample File : R3151H08 MS File : R3151H09 MSD File :

VOLATILE ORGANICS ANALYSIS QUALITY CONTROL DATA

CTIENT : VAN WATERS & ROGERS
DJECT # : BOISE
.OJECT NAME : VWR BOISE
SAMPLE MATRIX : WATER
FOR METHOD : 8010

SAMPLE I.D. # : 9403-097-1

DATE EXTRACTED : N/A
DATE ANALYZED : 03/15/94UNITS : ug/L -

: ug/L _

MPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
LOROBENZENE 1-DICHLOROETHENE TRICHLOROETHENE	<0.500 <0.200 <0.200	8.00 8.00 8.00	8.34 - 8.02 - 8.71 -	104 100 109	8.01 <u>7.90 -</u> 8.33 -	100 99 104	4 2 4
CONTROL LIMITS				% REC.			RPD
CHLOROBENZENE 1-DICHLOROETHENE ICHLOROETHENE				61 - 16 37 - 18 61 - 16	32		33 22 21
SURROGATE RECOVERIES		SPIKE		DUP. SI	PIKE	LIMITS	
MOCHLOROMETHANE		103		98		58 - 12	26

Page 1 Sample File : R3151H10-MS File : R3151H11 -MSD File : R3151H12-

APPENDIX C LABORATORY ANALYTICAL REPORTS FOR SOIL BORINGS

560 Naches Avenue, S.W., Suite 101, Renton, WA 98055 (206) 228-8335 Karen L. Mixon, Laboratory Manager

ATI I.D. # 9402-199

March 16, 1994

Harding Lawson Associates 105 Digital Drive Novato CA 94945

Attention: Michelle Beekman

Project Number : 20786.0062

Project Name : VWR Boise Mall

Dear Ms. Beekman:

On February 25, 1994, Analytical Technologies, Inc. (ATI), received ten samples for analysis. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The results, sample cross reference, and quality control data are enclosed.

The analysis for total organic carbon was done by ATI - San Diego, CA. Their report is included as an appendix.

Sincerely,

Jeff Westerlund Project Manager

JW/hal/mrj

Enclosure



SAMPLE CROSS REFERENCE SHEET

CLIENT : HARDING LAWSON ASSOCIATES

PROJECT # : 20786.0062

PROJECT NAME : VWR BOISE MALL

_		·		
	ATI #	CLIENT DESCRIPTION	DATE SAMPLED	MATRIX
	9402-199-1 9402-199-2 9402-199-3 9402-199-4 9402-199-5 9402-199-6 9402-199-7 9402-199-8	B9401-04 B9401-05 B9402-02 B9402-06 B9403-03 B9403-04 B9404-03 B9404-05 B9405-01	02/24/94 02/24/94 02/24/94 02/24/94 02/24/94 02/24/94 02/24/94 02/24/94 02/24/94	SOIL SOIL SOIL SOIL SOIL SOIL SOIL
-	9402-199-10	B9405-02	02/24/94	SOIL

---- TOTALS ----

MATRIX # SAMPLES
SOIL 10

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of the report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



ANALYTICAL SCHEDULE

CLIENT : HARDING LAWSON ASSOCIATES
PROJECT # : 20786.0062
PROJECT NAME : VWR BOISE MALL

ANALYSIS	TECHNIQUE	REFERENCE	LAB
PURGEABLE HALOCARBONS	GC/ELCD	EPA 8010	R
PURGEABLE AROMATICS	GC/PID	EPA 8020	R
TOTAL ORGANIC CARBON	WALKLEY-BLACK	ASA 90-3.2	SD
MOISTURE	GRAVIMETRIC	CLP SOW ILM01.0	R

= ATI - Renton

SD = ATI - San DiegoPHX = ATI - Phoenix

PNR = ATI - PensacolaATI - Fort Collins FC =

SUB = Subcontract



CASE NARRATIVE

CLIENT

: HARDING LAWSON ASSOCIATES

PROJECT #

: 20786.0062

PROJECT NAME : VWR BOISE MALL

CASE NARRATIVE: VOLATILE ORGANICS ANALYSIS

Ten (10) soil samples were received by ATI on February 25, 1994, for the following analysis: EPA method 8010/8020.

All corresponding quality assurance and quality control results defined as matrix spike/matrix spike duplicate (MS/MSD), blank spike (BS), method blank and surrogate recoveries were within the established control limits.



	PROJECT # : 20786.0062 PROJECT NAME : VWR BOISE MALL CLIENT I.D. : METHOD BLANK CAMPLE MATRIX : SOIL	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTOR	:	03/01/94 03/02/94 mg/Kg
a n	COMPOUNDS	RESULTS		
	BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE	<0.025 <0.010 <0.010 <0.050 <0.010 <0.025 <0.050 <0.010 <0.025 <0.025 <0.025 <0.025 <0.025 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010		
¥.	VINYL CHLORIDE TOTAL XYLENES	<0.050 <0.025		
IJ	SURROGATE PERCENT RECOVERY		LI	MITS
	BROMOCHLOROMETHANE BROMOFLUOROBENZENE	98 96		- 140 - 175



ATI I.D. # 9402-199-1

CLIENT: HARDING LAWSON ASSOCIATES PROJECT #: 20786.0062 PROJECT NAME: VWR BOISE MALL CLIENT I.D.: B9401-04 SAMPLE MATRIX: SOIL EPA METHOD: 8010/8020 RESULTS ARE CORRECTED FOR MOISTURE CONTENT	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTO	: 03/01/94 : 03/02/94 : mg/Kg
COMPOUNDS	RESULTS	
BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROFORM CHLOROMETHANE 1,2-DIBROMOETHANE (EDB) 1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHENE TRANS-1,2-DICHLOROETHENE CIS-1,2-DICHLOROETHENE 1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE METTYLENE CHLORIDE 1,1,2,2-TETRACHLOROETHANE TETRACHLOROETHENE	<0.010 <0.010 <0.052 <0.010 <0.026 <0.052 <0.010 <0.10 <0.026 <0.026 <0.026 <0.026 <0.026 <0.026 <0.010	
TOLUENE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE TRICHLOROETHENE TRICHLOROFLUOROMETHANE VINYL CHLORIDE TOTAL XYLENES	<0.026 <0.010 <0.010 <0.010 <0.026 <0.052 <0.026	·
SURROGATE PERCENT RECOVERY		LIMITS
BROMOCHLOROMETHANE BROMOFLUOROBENZENE	93 95	38 - 140 60 - 175



ATI I.D. # 9402-199-2

	CLIENT : HARDING LAWSON ASSOCIATES PROJECT # : 20786.0062 PROJECT NAME : VWR BOISE MALL CLIENT I.D. : B9401-05 SAMPLE MATRIX : SOIL EPA METHOD : 8010/8020 RESULTS ARE CORRECTED FOR MOISTURE CONTENT	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTOR	: :	02/24/94 02/25/94 03/01/94 03/02/94 mg/Kg 1	
	COMPOUNDS	RESULTS			
		-0.026			
	BENZENE	<0.026			
	BROMOFORM	<0.010			
	BROMOMETHANE				
	CARBON TETRACHLORIDE	<0.010			
į	CHLOROBENZENE CHLOROETHANE	<0.052			
	CHLOROFORM	<0.010			
•	CHLOROMETHANE	<0.10			
	1,2-DIBROMOETHANE (EDB)	<0.026			
	1,2-DICHLOROBENZENE	<0.026			
a ,	1,3-DICHLOROBENZENE	<0.026			
	1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE	<0.026			
	DIBROMOCHLOROMETHANE	<0.010			
	1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	<0.010			
	1,2-DICHLOROETHANE	<0.010			
	1,1-DICHLOROETHENE	<0.010			
	TRANS-1,2-DICHLOROETHENE	<0.010			
	CIS-1,2-DICHLOROETHENE	<0.010			
	1.2-DICHLOROPROPANE	<0.010			
-	CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE	<0.010			
	TRANS-1,3-DICHLOROPROPENE	<0.010			
1	ETHYLBENZENE	<0.026			
	METHYLENE CHLORIDE	<0.10			
	1,1,2,2-TETRACHLOROETHANE				
	TETRACHLOROETHENE	<0.010			
	TOLUENE	<0.026			
_	1,1,1-TRICHLOROETHANE	<0.010			
	1,1,2-TRICHLOROETHANE	<0.010			
	TRICHLOROETHENE	<0.010			
	TRICHLOROFLUOROMETHANE	<0.026 <0.052			
	VINYL CHLORIDE TOTAL XYLENES	<0.032			
	TOTAL VIDENCE	VU.U20			
. 1	SURROGATE PERCENT RECOVERY		LIM	ITS	
. :	BROMOCHLOROMETHANE	87		- 140	
	BROMOFLUOROBENZENE	92	60 -	- 175	
1					



ATI I.D. # 9402-199-3

	CLIENT : HARDING LAWSON ASSOCIATES PROJECT # : 20786.0062 PROJECT NAME : VWR BOISE MALL CLIENT I.D. : B9402-02 SAMPLE MATRIX : SOIL EPA METHOD : 8010/8020 RESULTS ARE CORRECTED FOR MOISTURE CONTENT	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTO	:	03/01/94 03/02/94 mg/Kg	
. (COMPOUNDS	RESULTS			
	BENZENE				
1	BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE	<0.012 <0.012 <0.060			
H	CARBON TETRACHLORIDE CHLOROBENZENE CHLOROETHANE	<0.012 <0.030 <0.060			
. }	CHLOROFORM CHLOROMETHANE 1,2-DIBROMOETHANE (EDB)	<0.012 <0.12			
A.J	1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE	<0.030 <0.030			
) 1	1,4-DICHLOROBENZENE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	<0.012			
	1,2-DICHLOROETHANE 1,1-DICHLOROETHENE TRANS-1,2-DICHLOROETHENE	<0.012 <0.012 <0.012			
	CIS-1,2-DICHLOROETHENE 1,2-DICHLOROPROPANE CIS-1.3-DICHLOROPROPENE	<0.012 <0.012 <0.012			
	TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE METHYLENE CHLORIDE	<0.030 <0.12			
	1,1,2,2-TETRACHLOROETHANE TETRACHLOROETHENE TOLUENE	<0.012 <0.012 <0.030			
	1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE TRICHLOROETHENE TRICHLOROFLUOROMETHANE	<0.012 <0.012 <0.012 <0.030			
	VINYL CHLORIDE TOTAL XYLENES	<0.030 <0.060 <0.030			
1	SURROGATE PERCENT RECOVERY		LIM	MITS	
	BROMOCHLOROMETHANEBROMOFLUOROBENZENE	84 90		- 140 - 175	



	CLIENT I.D. : B9402-06 SAMPLE MATRIX : SOIL	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTO	: 02/25/94 D : 03/01/94 : 03/02/94 : mg/Kg
_	COMPOUNDS	RESULTS	
	BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE	<0.010 <0.010 <0.052 <0.010 <0.026 <0.052 <0.010 <0.10 <0.026 <0.026 <0.026 <0.026 <0.026 <0.010 <0.010 <0.010 <0.010 <0.010	
	VINYL CHLORIDE TOTAL XYLENES	<0.052 <0.026	
_]	SURROGATE PERCENT RECOVERY		LIMITS
	BROMOCHLOROMETHANEBROMOFLUOROBENZENE	88 95	38 - 140 60 - 175



	DAIA BOULARI		
	PROJECT # : 20786.0062 PROJECT NAME : VWR BOISE MALL CLIENT I.D. : B9403-03 SAMPLE MATRIX : SOIL	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTOR	: 02/25/94 : 03/01/94 : 03/02/94 : mg/Kg
_	COMPOUNDS	RESULTS	
S,	COMPOUNDS		-
	BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROETHANE CHLOROFORM CHLOROMETHANE 1,2-DIBROMOETHANE (EDB) 1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE 1,4-DICHLOROBENZENE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHENE TRANS-1,2-DICHLOROETHENE CIS-1,2-DICHLOROETHENE 1,2-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE METHYLENE CHLORIDE 1,1,2,2-TETRACHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE TTRICHLOROETHANE TTRICHLOROETHANE TTRICHLOROETHANE TTRICHLOROETHANE TTRICHLOROETHANE TRICHLOROETHENE	<0.029 <0.011 <0.011 <0.057 <0.011 <0.029 <0.057 <0.011 <0.029 <0.029 <0.029 <0.029 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.029 <0.029 <0.011 <0.011 <0.029 <0.011 <0.029 <0.011 <0.029 <0.011 <0.029 <0.011 <0.029	
	VINYL CHLORIDE TOTAL XYLENES	<0.057 <0.029	
J.	SURROGATE PERCENT RECOVERY	.3.025	LIMITS
	BROMOCHLOROMETHANE BROMOFLUOROBENZENE	82 87	38 - 140 60 - 175
_			



PROJECT NAME : VWR BOISE MALL CLIENT I.D. : B9403-04 SAMPLE MATRIX : SOIL	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTOR	: 03/01/94 : 03/02/94 : mg/Kg
COMPOUNDS	RESULTS	
COMPOUNDS		
	•	
BENZENE	<0.027	
BROMODICHLOROMETHANE	<0.011	
BROMOFORM	<0.011	
BROMOFORM BROMOMETHANE	<0.053	
CARBON TETRACHLORIDE	<0.011	
CHLOROBENZENE	<0.027	
CHLOROETHANE	<0.053	
CHLOROFORM	<0.011	
CHLOROMETHANE	<0.11	
31,2-DIBROMOETHANE (EDB)	<0.027	
1,2-DICHLOROBENZENE	<0.027 <0.027	
1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE	<0.027	
	<0.027	
DIBROMOCHLOROMETHANE		
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	<0.011	
1,1-DICHLOROETHENE	<0.011	
TRANS-1,2-DICHLOROETHENE CIS-1,2-DICHLOROETHENE	<0.011	
1,2-DICHLOROPROPANE	<0.011	
CTC 1 2 DTCULODODDODENE	<0.011	
TRANS-1,3-DICHLOROPROPENE	<0.011	
ETHYLBENZENE	<0.027	
· · · ·	<0.11	
*METHYLENE CHLORIDE 1,1,2,2-TETRACHLOROETHANE	<0.011	
TETRACHLOROETHENE	<0.011	
TOLUENE	<0.027	
1,1,1-TRICHLOROETHANE	<0.011	
1,1,2-TRICHLOROETHANE	<0.011	
TRICHLOROETHENE	<0.011	
TRICHLOROFLUOROMETHANE	<0.027	
VINYL CHLORIDE	<0.053	
TOTAL XYLENES	<0.027	
SURROGATE PERCENT RECOVERY		LIMITS
BROMOCHLOROMETHANE	82	38 - 140
BROMOFLUOROBENZENE	87	60 - 175
_2 + •		



	PROJECT NAME : VWR BOISE MALL CLIENT I.D. : B9404-03	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTOR	: 02/25/94 : 03/01/94 : 03/02/94
- } ¹	COMPOUNDS	RESULTS	
	BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROFORM CHLOROMETHANE 1,2-DIBROMOETHANE (EDB) 1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHENE TRANS-1,2-DICHLOROETHENE CIS-1,2-DICHLOROETHENE 1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE METHYLENE CHLORIDE 1,1,2,2-TETRACHLOROETHANE TCHLOROETHENE TOLUENE 1,1,1-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE TRICHLOROETHENE TRICHLOROETHENE TRICHLOROETHENE TRICHLOROETHENE TRICHLOROETHENE TRICHLOROETHENE TRICHLOROETHENE TRICHLOROETHENE TRICHLOROETHENE TRICHLOROFLUOROMETHANE TRICHLOROFLUOROMETHANE TRICHLOROFLUOROMETHANE VINYL CHLORIDE	<0.029 <0.011 <0.011 <0.057 <0.011 <0.029 <0.057 <0.011 <0.029 <0.029 <0.029 <0.029 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011 <0.011	
	TOTAL XYLENES	<0.029	
	SURROGATE PERCENT RECOVERY		LIMITS
	BROMOCHLOROMETHANE		38 - 140 60 - 175
	•	•	



CLIENT : HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 02/24/94
PROJECT # : 20786.0062	DATE RECEIVED	. 02/24/34
PROJECT # : 20/86.0062	DATE RECEIVED	: 02/25/94
PROJECT NAME : VWR BOISE MALL	DATE EXTRACTED	: 03/01/94
CLIENT I.D. : B9404-05	DATE ANALYZED UNITS	: 03/02/94
SAMPLE MATRIX : SOIL	UNITS	: mg/Kg
EPA METHOD : 8010/8020	DILUTION FACTO	R : 1
SAMPLE MATRIX : SOIL EPA METHOD : 8010/8020 RESULTS ARE CORRECTED FOR MOISTURE CONTENT	•	
Vi		
COMPOUNDS	RESULTS	
BENZENE	<0.027	
BROMODICHLOROMETHANE	<0.011	
BROMOFORM	<0.011	
BROMOMETHANE	<0.055	
_ CARBON TETRACHLORIDE	<0.011	
CHIODODENZENE	-0 027	
CHLOROBENZENE	40.027	
CHLOROFORM	<0.011	
CHLOROMETHANE	<0.11	
1,2-DIBROMOETHANE (EDB)	<0.027	
1,2-DICHLOROBENZENE	<0.027	
1,3-DICHLOROBENZENE	<0.027	
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE	<0.027	
DIBROMOCHLOROMETHANE	<0.011	
	<0.011	
1.2-DTCHLOROETHANE	<0.011	
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHENE	<0.011	
TPDANG_1 2_DECHLORORTHRNR	~ () () 1 1	
CIS-1,2-DICHLOROETHENE	<0.011	
1,2-DICHLOROPROPANE	<0.011	
	<0.011	
CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE	<0.011	
ETHYLBENZENE	<0.027	
METHYLENE CHLORIDE	<0.11	
1,1,2,2-TETRACHLOROETHANE	<0.011	
TOLUENE	<0.027	
1,1,1-TRICHLOROETHANE	<0.011	
1,1,2-TRICHLOROETHANE	<0.011	
TRICHLOROETHENE	<0.011	
TRICHLOROFLUOROMETHANE	<0.027	
VINYL CHLORIDE	<0.055	
TOTAL XYLENES	<0.027	
SURROGATE PERCENT RECOVERY		LIMITS
D. C.		
BROMOCHLOROMETHANE	80	38 - 140
BROMOFLUOROBENZENE	87	60 - 175
	<i>37</i>	00 1/3
B {		



}	CLIENT : HARDING LAWSON ASSOCIATES PROJECT # : 20786.0062 PROJECT NAME : VWR BOISE MALL CLIENT I.D. : B9405-01 SAMPLE MATRIX : SOIL EPA METHOD : 8010/8020 RESULTS ARE CORRECTED FOR MOISTURE CONTENT	DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTO	: 02/25/94 D : 03/01/94 : 03/02/94 : mg/Kg
	COMPOUNDS	RESULTS	
	BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROFORM CHLOROMETHANE 1,2-DIBROMOETHANE (EDB) 1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE 1,4-DICHLOROMETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE	<0.029 <0.012 <0.012 <0.059 <0.012 <0.059 <0.059 <0.012 <0.029 <0.029 <0.029 <0.029 <0.029 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012 <0.012	
_	SURROGATE PERCENT RECOVERY		LIMITS
	BROMOCHLOROMETHANE BROMOFLUOROBENZENE	86 86	38 - 140 60 - 175



	CLIENT : HARDING LAWSON ASSOCIATES PROJECT # : 20786.0062 PROJECT NAME : VWR BOISE MALL CLIENT I.D. : B9405-02 SAMPLE MATRIX : SOIL EPA METHOD : 8010/8020 RESULTS ARE CORRECTED FOR MOISTURE CONTENT	DILUTION FACTO	• marka
,	COMPOUNDS	RESULTS	
	BROMOFORM BROMOMETHANE	<0.012 <0.012 <0.060	
ì.	CARBON TETRACHLORIDE CHLOROBENZENE	<0.012 <0.030	
}	CHLOROBENZENE CHLOROETHANE	<0.060	
	CHLOROFORM	<0.012	
	CHLOROMETHANE	<0.12	
Н	CHLOROMETHANE 1,2-DIBROMOETHANE (EDB)	<0.030	
	1,2-DICHLOROBENZENE	<0.030	
A I	1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE	<0.030	
1	1,4-DICHLOROBENZENE		
	DIBROMOCHLOROMETHANE	<0.012	
ı	1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	<0.012	
	1,2-DICHLOROETHANE	<0.012	
ı	1,1-DICHLOROETHENE TRANS-1,2-DICHLOROETHENE CIS-1,2-DICHLOROETHENE	<0.012	
	TRANS-1, Z-DICHLOROETHENE	<0.012	
	1 2 DICHLOROBINE	<0.012	
i::)	1,2-DICHLOROPROPANE	<0.012	
	CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE	<0.012	
	ETHYLBENZENE	<0.030	
}		.0.10	
	1.1.2.2-TETRACHLOROETHANE	<0.012	
1	TETRACHLOROETHENE	0.088	
	TETRACHLOROETHENE TOLUENE	<0.030	
_	1,1,1-TRICHLOROETHANE	<0.012	
1	1,1,2-TRICHLOROETHANE	<0.012	
•	TRICHLOROETHENE	<0.012	
-4	TRICHLOROFLUOROMETHANE	<0.030	
. (1)	VINYL CHLORIDE	<0.060	
11	TOTAL XYLENES	<0.030	
دو	SURROGATE PERCENT RECOVERY		LIMITS
1	SURRUGATE PERCENT RECOVERT		DIMITO
	BROMOCHLOROMETHANE	92	38 - 140
4,	BROMOFLUOROBENZENE	88	60 - 175
		- -	_



VOLATILE ORGANICS ANALYSIS QUALITY CONTROL DATA

CLIENT : HARDING LAWSON ASSOCIATES SAMPLE I.D. # : BLANK

PROJECT # : 20786.0062 DATE EXTRACTED : 03/01/94
PROJECT NAME : VWR BOISE MALL DATE ANALYZED : 03/02/94

SAMPLE MATRIX : SOIL UNITS : mg/Kg

EPA METHOD : 8010/8020

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	<0.0250 <0.0250 <0.0100 <0.0250 <0.0100	0.400 0.400 0.400 0.400 0.400	0.409 0.427 0.403 0.385 0.431	102 107 101 96 108	N/A N/A N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A N/A
CONTROL LIMITS BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE				% REC. 57 - 1 71 - 1 51 - 1 65 - 1 55 - 1	.44 .63 .61		RPD 20 20 22 20 24
SURROGATE RECOVERIES BROMOCHLOROMETHANE		SPIKE 90		DUP. S	SPIKE	LIMITS 38 - 1	3
BROMOFLUOROBENZENE		87		N/A		60 - 1	.75



ATI I.D. # 9402-199

VOLATILE ORGANICS ANALYSIS QUALITY CONTROL DATA

SAMPLE I.D. # : 9402-199-1 DATE EXTRACTED : 03/01/94 : HARDING LAWSON ASSOCIATES CLIENT CLIENT : HARDING LAN PROJECT # : 20786.0062

DATE ANALYZED : 03/02/94 PROJECT NAME : VWR BOISE MALL

: mg/Kg SAMPLE MATRIX : SOIL UNITS EPA METHOD : 8010/8020

							
COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
,,							
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	<0.0250 <0.0250 <0.0100 <0.0250 <0.0100	0.400 0.400 0.400 0.400 0.400	0.399 0.421 0.410 0.380 0.426	100 105 102 95 107	0.415 0.433 0.426 0.396 0.430	104 108 107 99 108	4 3 4 4 1
CONTROL LIMITS				% REC.			RPD
BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE				50 - 1. 55 - 1. 35 - 1. 62 - 1. 49 - 1	66 4 1		20 20 22 20 24
SURROGATE RECOVERIES		SPIKE		DUP. S	PIKE	LIMITS	
BROMOCHLOROMETHANE BROMOFLUOROBENZENE		87 90		92 98		38 - 1 60 - 1	40 75 .



GENERAL CHEMISTRY ANALYSIS

CLIENT : HARDING LAWSON ASSOCIATES PROJECT # : 20786.0062

MATRIX : SOIL

PROJECT NAME : VWR BOISE MALL

PARAMETER

DATE ANALYZED

MOISTURE

03/02/94



GENERAL CHEMISTRY ANALYSIS DATA SUMMARY

CLIENT : HARDING LAWSON ASSOCIATES MATRIX : SOIL

PROJECT # : 20786.0062

PROJECT NAME : VWR BOISE MALL UNITS : %

	ATI I.D. #	CLIENT I.D.	MOISTURE
_			
	9402-199-1	B9401-04	3.3
	9402-199-2	B9401-05	4.1
_	9402-199-3	B9402-02	16
	9402-199-4	B9402-06	3.0
	9402-199-5	B9403-03	13
	9402-199-6	B9403-04	6.5
	9402-199-7	B9404-03	13
	9402-199-8	B9404-05	8.6
	9402-199-9	B9405-01	15
	9402-199-10	B9405-02	16



GENERAL CHEMISTRY ANALYSIS QUALITY CONTROL DATA

CLIENT : HARDING LAWSON ASSOCIATES PROJECT # : 20786.0062

MATRIX : SOIL

PROJECT NAME : VWR BOISE MALL

UNITS : %

PARAMETER	ATI I.D.	SAMPLE RESULT	DUP RESULT	RPD	011110-	SPIKE ADDED	% REC
MOISTURE	9402-199-5	13	14	7	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result) Spike Concentration

| RPD (Relative % Difference) = | (Sample Result - Duplicate Result) | Average Result

Harding Lawson Associates 1325 Fourth Avenue, Suite 1800 Seattle, WA 98101 (206) 522-0812 (206) 292-8619 Telectory

CHAIN OF CUSTODY FORM

Lab: 9402.199

(206) 292-8619	Telecopy			Sa	mnlers:	Both Gei	nel	_ [ANALYSI	 TED	
Job Number:_ Name/Location Project Manag	7: VWR B	oise Mal			corder:	Signature Reduiyed)	/A		GAVIC		
SOURCE CODE Water W Sediment D Soil X	Unpress H, SO 4 HNO 3 HN	SAMF NUME OF LA NUME	R B	Yr Mo	DATE Dy Time	2-24-94		EPA 601/8010 EPA 602/8020 EPA 624/8240	ICP METALS ICP ASSISMITH TOTAL OR		
1 4 0 X 2 4 8 X 3 4 8 X 4 4 8 X 5 4 9 X 6 4 8 X 7 4 8 X 7 4 8 X 9 4 9 X 9 4 9 X		B940 B940 B940 B940 B940	1-05 2-06 2-06 3-03 1-03 1-05 5-04	9402 9402 9402 9402 9402 9402 9402	24014 24021 24041	5 0 17 0 4-6 5 6.7 5 87 8 5 6 8	9.5-10' 11.5-12' 5.5-6' 13.5-14' 6.5-7' 9.5-10' 7.5-8' 11.5-12' 3.5-4'				
LAB	DEPTH COL	QA			 						

		L NUI	AB MB1				- 1	PTI N		CO MT	미		DA DDI	Ē .	MISCELLANEOUS	CHAIN OF CUSTODY RECORD		
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Laboratory Copy Project Office Copy Field or Office Copy
White Yellow Pink

6533



APPENDIX



SAMPLE CROSS REFERENCE

Page 1

: ANALYTICAL TECHNOLOGIES, INC.

Report Date: March 14, 1994

ATI I.D. : 403115

?roject # : 9402-199

ject Name: VWR BOISE MALL

Client Description	Matrix	Date Collected
	SOIL	24-FEB-94
9402-199-1	SOIL	24-FEB-94
9402-199-2	SOIL	24-FEB-94
9402-199-3	SOIL	24-FEB-94
9402-199-4 9402-199-5	SOIL	24-FEB-94
9402-199-5	SOIL	24-FEB-94
9402-199-6	SOIL	24-FEB-94
•	SOIL	24-FEB-94
9402-199-8	SOIL	24-FEB-94
9402-199-9 9402-199-10	SOIL	24-FEB-94

---TOTALS---

<u>Matrix</u>

SOIL

Samples

10

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of Is report. If an extended storage period is required, please contact our sample control partment before the scheduled disposal date.



ANALYTICAL SCHEDULE

Page 2

ent : ANALYTICAL TECHNOLOGIES, INC.

Project # : 9402-199

ATI I.D.: 403115

Project Name: VWR BOISE MALL

lr plysis

Technique/Description

90-3.2 (TOTAL ORGANIC CARBON)

WALKLEY-BLACK



GENERAL CHEMISTRY RESULTS

Page 3

lent : ANALYTICAL TECHNOLOGIES, INC.

ject # : 9402-199

ATI I.D.: 403115

pple Client ID		Matrix			Date	Date
					Sampled	Received
9402-199-1		SOIL			24-FEB-94	08-MAR-9
9402-199-2		SOIL			24-FEB-94	08-MAR-9
9402-199-3		SOIL			24-FEB-94	08-MAR-9
9402-199-4		SOIL			24-FEB-94	08-MAR-9
9402-199-5		SOIL			24-FEB-94	08-MAR-9
arameter	Unit	s 1	2	3	4	5
TAL ORGANIC CARBON (WB)	*	0.05	0.04	0.12	0.02	0.05



GENERAL CHEMISTRY RESULTS

Page 4

: ANALYTICAL TECHNOLOGIES, INC.

: 9402-199

ATI I.D.: 403115

<u>r</u> oject	Name:	VWR	BOISE	MALL	
70)ecc	Hame.				

ple Client ID		Matrix			Date Sampled	Date Received
9402-199-6 9402-199-7 9402-199-8 9402-199-9 9402-199-10		SOIL SOIL SOIL SOIL SOIL			24-FEB-94 24-FEB-94 24-FEB-94 24-FEB-94 24-FEB-94	08-MAR-94 08-MAR-94 08-MAR-94 08-MAR-94 08-MAR-94
Parameter	Unit	ts 6	7	8	9	10
AL ORGANIC CARBON (WB)	 %	0.06	0.05	0.09	0.12	0.18



GENERAL CHEMISTRY - QUALITY CONTROL

DUP/MS

Page 5

lient : ANALYTICAL TECHNOLOGIES, INC.

oject # : 9402-199
oject Name: VWR BOISE MALL

ATI I.D. : 403115

Perameters	REF I.D. Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL ORGANIC CARBON (WB) TAL ORGANIC CARBON (WB)	403049-11 % 403075-03 %	0.02 0.26	0.03	40er 7	0.26 0.50	0.27	89 89

Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative & Difference) = (Sample Result - Duplicate Result)*100/Average Result



GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Page 6

: ANALYTICAL TECHNOLOGIES, INC. :lient

ATI I.D.: 403115 : 9402-199 ject Namu: VWR BOISE MALL

ameters	Blank Spike ID#	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
TAL ORGANIC CARBON (WB) AL ORGANIC CARBON (WB)	44746 44771	ક ક	<0.010 <0.010	0.051 0.052	0.053 0.053	96 98

Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration (Relative & Difference) = (Sample Result - Duplicate Result) *100/Average Result



DATE LISTING FOR INORGANICS FOR PROJECT ID RENTON 13-MAR-94
FOR ACCESSIONS RECEIVED WITHIN THE LAST 90 DAYS
ACCESSION # 403115

PAGE 1

Project Id: RENTON

Proj Name : VWR BOISE MALL Accession : 403115

pj Num : 9402-199 Accession : 403115

Test: ASA 90-3.2 (TOTAL ORGANIC CARBON)

ATI#	Matrix	Client ID	Sampled	Received	Analyzed	Prep Date
1	SOIL	9402-199-1	24-FEB-94	08-MAR-94	10-MAR-94	N/A
2	SOIL	9402-199-2	24-FEB-94	08-MAR-94	10-MAR-94	N/A
3	SOIL	9402-199-3	24-FEB-94	08-MAR-94	10-MAR-94	N/A
4	SOIL	9402-199-4	24-FEB-94	08-MAR-94	10-MAR-94	N/A
5	SOIL	9402-199-5	24-FEB-94	08-MAR-94	11-MAR-94	N/A
6	SOIL	9402-199-6	24-FEB-94	08-MAR-94	11-MAR-94	n/a
7	SOIL	9402-199-7	24-FEB-94	08-MAR-94	11-MAR-94	N/A
8	SOIL	9402-199-8	24-FEB-94	08-MAR-94	11-MAR-94	N/A
9	SOIL	9402-199-9	24-FEB-94	08-MAR-94	11-MAR-94	N/A
10	SOIL	9402-199-10	24-FEB-94	08-MAR-94	11-MAR-94	N/A



Analytical Technologies, Inc. SAN DIEGO FLAGS

INORGANICS

ET AC	MEGG V CE L	DESCRIPTION
LIVAL		

RESULT

В	ABSOLUTE VALUE OF ANALYTE CONCENTRATION IS < CRDL BUT > THE IDL
BB	RESULT BETWEEN IDL AND LOQ
E	ESTIMATED VALUE DUE TO INTERFERENCE
W	POST DIGESTION SPIKE OUT OF CONTROL LIMITS
M	DUPLICATE INJECTION PRECISION NOT MET
N	SPIKED SAMPLE RECOVERY NOT WITHIN CONTROL LIMITS
S	REPORTED VALUE WAS DETERMINED BY METHOD OF STANDARD ADDITIONS
U	COMPOUND WAS ANALYZED FOR BUT NOT DETECTED
*	DUPLICATE ANALYSIS NOT WITHIN CONTROL LIMITS
+	CORRELATION COEFFICIENT FOR MSA IS LESS THAN 0.995
*H	RESULTS OUTSIDE OF LIMITS DUE TO SAMPLE MATRIX INTERFERENCE
*Q	INSUFFICIENT SAMPLE FOR ANALYSIS
*R	DATA IS NOT USABLE
*V	SAMPLE RESULT IS >4X SPIKED CONCENTRATION, THEREFORE SPIKE IS NOT DETECTABLE
*Y	RESULT NOT ATTAINABLE DUE TO SAMPLE MATRIX INTERFERENCE
@C	VARIABLE MESSAGE
@H	DETECTION LIMIT ELEVATED DUE TO MATRIX INTERFERENCE
@Q	DETECTION LIMIT ELEVATED DUE TO LIMITED SAMPLE FOR ANALYSIS
@R	RPD LIMIT IS 67% FOR INORGANIC RESULTS LESS THAN TEN TIMES THE REPORTING DETECTION
	LIMIT
@V	PRE-DIGEST SPIKE OUT OF LIMITS. POST DIGESTION SPIKE YIELDED ACCEPTABLE RESULTS
@Y	ION BALANCE OUTSIDE OF ATT'S ACCEPTANCE LIMITS; REANALYSIS CONFIRMED ORIGINAL

TO PHOENIXTAZ

DIGESTION NEEDED?

Chain of Custody LABORATORY NUMBER: 4/3/15 Analytical Technologies, Inc. 560 Naches Avenue SW, Suite 101 Renton, WA 98055 (206)228-8335 **ANALYSIS REQUEST** PROJECT MANAGER: TEFF WESTER'(UM) ANALYTICAL TECHNOLOGIES, INC. NUMBER OF CONTAINERS 560 NACHES AVE SW, SUITE 101 NITRATE/NITRITE
PP METALS RENTON, WA 98055 (206) 228-8335 SAMPLE DISPOSAL INSTRUCTIONS CYANIDE ATI Disposal ☑ Return 00 00 00 00 00 00 00 MATRIX LABID DATE SAMPLE ID RELINQUISHED BY: 1, RELINQUISHED BY: SAMPLE RECEIPT 2. RELINQUISHED BY: PROJECT INFORMATION Time: Signature: Time: Signature: TOTAL NUMBER OF CONTAINERS ATI PROJ #: 9402 199 ATI PROJ NAME: VUL BOSE NO! COC SEALS/INTACT? Y/N/NA Date: Printed Name: Date: Printed Name: Date: CLIENT PROJ: RECEIVED GOOD COND./COLD RECEIVED VIA: Company: Company Company: SPECIAL INSTRUCTIONS: RECEIVED BY: RECEIVED BY: RECEIVED BY: (LAB) VERBALS DUE: 3/2 Time: Signature: HARDCOPY DUE: 3/28 Printed Name: Date: Printed Name: PRICE: <u>EO</u> DISC:_____ %

Company:



LABORATORY ANALYTICAL REPORTS FOR PIER 1 EXTRACTION/MONITORING WELL



104 West 31st Street Bolse, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soil Analysis

LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD.

BOISE, IDAHO

COMPOUND

83709

DATE COLLECTED: 02/27/94 TIME COLLECTED: 23:45

DATE RECRIVED: 02/28/94

DATE REPORTED: 03/01/94 COLLECTED: GEIGER/BEEKMAN

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR, BOISE / JN #20786.0062 / WATER

SOURCE-: EW-1-20

LAB SAMPLE NUMBER - 50681

LABORATORY REPORT FOR *PURGABLE HALOCARBONS BY 8010*

<u>RESULTS</u> LEVEL (ug/1)

REGULATED VOC'S (DRINKING WATER)

Trichloroethylene A p-Dichlorobenzene	5 ND S ND S ND S ND ND ND
--	---------------------------

经正面 化化氯化 化医疗 化医疗 化阿拉伯氏 医自体 医阿拉伯氏 化化二甲烷 医疗 化化二甲烷 Date Analyzed: 02/28/94

• ND = Mone Detected

Analyst: BRAD BROKER

DRT CONT. WEXT PAGE

Howell, Laboratory Manager



104 West 31st Street Boise. Idoho 83714

Phone (208) 536-1172 FAX (208) 336-7124

Water, Waste Water and Soil Analysis

REPORT CONTINUED

"Lab No. 50681"

GUNPOUND	LEVEL (ug/1)	ANALYTICAL RESULTS
THN'S (TRIHALOMETHANES)		
Bromodichloromethane /	0.2	•ND
Chlorodibromomethane/	0.5	ND
	1.0	HD
Bromoform / Chloroform /	0.2	ND

UNREGULATED YOC'R (DRINKING WATER)

COMPOUND	TEAET (Ad/1)	ANALYTICAL RESULTS (Vq/L)
Bromobenzene 🗸	0.5	CK+
Bromochloromethane 🗸 .	0.5	ИD
Bromomethane 🗸	2.0	ND
Chloroethane 🗸	1.0	ND
Chloromethene/	0.5	ND
2-Chlorotoluene/	0.5	HD
4-Chlorotoluene /	0.5	ND
1, 2-Dibromo-3-Chloropropane V Debus	5.0	ND
1,2-Dibromoethane	1.5	nd
Dibromomethane / Meth. Lownik	4.0	ND
Dichlorodifluoromethano/	0.5	ND
1,1-Dichloroethane/	0.5	ND
1.3-Dichloropropene/	0.5	ND
2, 2-Dichloropropane	0.5	ND
1,1-Dichloropropene/	0.5	ИD
Hexachlorobutediene V	0.5	ND
1, 1, 1, 2-Tetrachloroethane	0.5	ND
1, 1, 2, 2-Tetrachloroethane	0.5	ND
Toluene	0.5	ND
1, 2, 3-Trichlorobenzene	0.5	ND
Trichlorofluoromethane/	0.5	ND
1,2,3-Trichloropropane/	0.5	ND

• ND = None Detected

VAN NATERS & ROGERS INC. / ATTN: MIKE GAUDETTE



104 West 31st Street Boise, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soll Analysis

PAGE 02

LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD.

2083367124

BOISE, IDAHO

83709

DATE COLLECTED: 03/01/94 TIME COLLECTED: 02:30 DATE RECEIVED: 03/01/94 DATE REPORTED: 03/01/94

SUBMITTED: M. BEEKHAN

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR, BOISE MALL / WATER

SOURCE-: EW-1-40

LAB SAMPLE NUMBER - 50749

LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 6010"

25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0	+ND ND N
25. 0 25. 0	ND 20300.0
25.0 25.0	CK CK CEEEEEEEEEEEEEEEE
	25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0

Date Analyzed: 03/01/94

. ND = None Detected

Analyst: BRAD BROKER

ORT CONT. NEXT PAGE



104 West 31st Street Boise, Idaho 83714 Phone (208) 336-1172 FAX (208) 336-7124

50.0

Water, Waste Water and Soli Analysis

ND

REPORT CONTINUED

Chloroform

Total THM's

"Lab No. 50749"

PAGE 2

•	METHOD DETECTION LEVEL (UG/L)	ANALYTICAL RESULTS
COMPOUND		
THE'S (TRIBALDMETHANES) Bromodichloromethane	10.0 25.0	◆ND ND
Chlorodibromomethane Bromoform	50.0 10.0	nd ND

UMREGULATED VOC'S (DRINKING WATER)

	METHOD DETECTION LEVEL (UG/L)	ANALYTICAL RESULTS (ug/L)
СОНРОИНО		+XD
Bromobenzene	25.0	ND
Bromochloromethane	25.0	иD
Bromomethane	100.0	иD
PLOMOMACHONE	50. 0	
Chloroethane	25.0	ЖD
Chloromethane	25.0	מא
2-Chlorotoluene	25.0	ND
4-Chlorotoluene	250.0	ИD
1, 2-Dibrozo-3-Chloropropane	75.0	ND
1,2-Dibromoethane	200.0	ND
Dibromomethane	25.0	ND
1,3-Dichlorobenzene	25.0	ND
Dichlorodifluoromethane	25.0	ND
1,1-Dichloroethane	25.0	ND
1.3-Dichloropropane	25.0	ЙЙ
2, 2-Dichleropropane	25. O	ND '
, i-Dichloropropené	- ·	HD
Yevechlorobutediene	25.0	аи
, , , o-Tetrachloroethane	25.0	ND
1, 1, 2, 2-Tetrachloroethane	25.0	ND
Toluene	25.0	ИD
1,2,3-Trichlorobenzene	25.0	ND
Trichlorofluoromethans	25.0	ИD
1, 2, 3-Trichloropropane	25.0	n D

• ND = None Detected

ENT: YAN WATERS & ROGERS / ATTN: KIKE GAUDETTE

~~~ ... ~~



104 West 31st Street Boise, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soil Analysis

## LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD.

BOISE, IDAHO

83709

DATE COLLECTED: 03/01/94

TIME COLLECTED: 06:00

DATE RECEIVED: 03/01/94 DATE REPORTED: 03/01/94

SUBHITTED: M. BEEKMAN

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR, BOISE HALL / WATER

SOURCE -: EW-1-50

LAB SAMPLE NUMBER - 50750

## LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010"

| ======================================                                  | METHOD DETECTION  LEVEL (µg/L) | RESULTS            |
|-------------------------------------------------------------------------|--------------------------------|--------------------|
| CORPOUND                                                                |                                |                    |
| REQUILATED YOU'S (DRINKING WATER)                                       |                                |                    |
| Vinyl Chloride<br>1,1-Dichloroethylene                                  | 10.0<br>25.0<br>25.0           | +nd<br>HD<br>ND    |
| 1,1,1-Trichlorethane<br>Carbon Tetrachloride<br>1,2-Dichloroethane      | 25.0<br>25.0<br>25.0           | nd<br>Nd<br>Nd     |
| Trichlorosthylene<br>p-Dichlorobenzene<br>Chlorobenzene                 | 25. 0<br>25. 0                 | ND<br>ND<br>ND     |
| o-Dichlorobenzene<br>cis-1,2-Dichloroethene<br>trans-1,2-Dichloroethene | 25. 0<br>25. 0<br>25. 0        | nd<br>Nd           |
| 1,2-Dichloropropane<br>Methylene Chloride                               | 25. 0<br>25. 0<br>25. 0        | ND<br>ND<br>440. 0 |
| Tetrachloroethene 1,2,4-Trichlorobenzene 1,1,2-Trichloroethene          | <b>25.</b> 0<br><b>25.</b> 0   | ND<br>ND           |

. ND = None Detected Date Analyzed: 03/01/94

Analyst: BRAD BROKER

ORT COMT. NEXT PAGE

Laboratory Manager



104 West 31st Street Dolse, Idaho 83714 Phono (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Soll Analysis

REPORT CONTINUED

\*Lab No. 50750\*

PAGE 2

| COMPOUND                                                                               | LEVEL (UD/L)                 | ANALYTICAL<br>RESULTS |
|----------------------------------------------------------------------------------------|------------------------------|-----------------------|
| THE'S (TRIHALDHETRAKES)                                                                |                              |                       |
| Bromodichloromethane<br>Chlorodibromomethane<br>Bromoform<br>Chloroform<br>Total THM's | 10.0<br>25.0<br>50.0<br>10.0 | *ND<br>ND<br>ND<br>ND |

## UMREGULATED VOC'S (DRINKING WATER)

|                              | METHOD DETECTION | ANALYTICAL     |
|------------------------------|------------------|----------------|
| COMPOUND                     | LEVEL (ug/L)     | RESULTS (va/L) |
| 7                            | 25.0             | -HD            |
| Bromobenzene                 | 25.0             | ИD             |
| Bromochloromethane           | 100.0            | ИD             |
| Bromomethana                 | 50, 0            | ND             |
| Chloroethane                 | 25. 0            | ND             |
| Chloromethane                |                  | ND             |
| 2-Chlaratoluene              | 25.0             | ИD             |
| 4-Chloretoluene              | 25.0             | ND             |
| 1.2-Dibromo-3-Chloropropane  | 250.0            | מא             |
| 1, 2-Dibromoethane           | 75.0             | ND             |
| Dibromomethane               | 200.0            | ND             |
| 1, 3-Diulilorobenzene        | 25.0             | • • •          |
| Dichlorodifluoromethene      | 25.0             | ND             |
| 1, 1-Dichlorpethane          | 25.0             | ND             |
| 1, 3-Dichloropropane         | <b>25.</b> 0     | HD             |
| 2, 2-Dichloroprupane         | 25.0             | עא             |
| 1, 1-Dichloropropens         | <b>25.</b> 0     | ND             |
| Hexachtoropatagrams          | 25.0             | ND             |
| 1, 1, 1, 2-Tetrachluroethane | <b>25.</b> 0     | ND             |
| 1, 1, 1, 2-16fledulotdername | 25.0             | ND             |
| 1, 1, 2, 2-Tetrachlurgethane | 25.0             | ИD             |
| Toluene                      | 25.0             | ND             |
| 1, 2, 3-Trichlorobenzene     | 25. 0            | ДK             |
| Trichlorofluoromethane       | 25. O            | иD             |
| 1.2.3-Trichloropropane       | 20.0             | ·              |

\* ND = None Detected

CLEENT: VAN WATERS & ROCERS / ATTN: MIKE GAUDETTE



"CDG 2002 | 2012500000"

#### Alchem Laboratories, inc.

104 West 31st Street Boko, Idaha \$3714

Phone (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Self Analysis

#### LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD. BOISE, IDAHO

83709

DATE COLLECTED: 03/02/94
TIME COLLECTED: 13:00
DATE RECEIVED: 03/02/94

DATE REPORTED: 03/02/94 SUBMITTED: B. GRRGER

ATTENTION: NR. MIKE GAUDETTE PROJECT: VWR, BOISE MALL / WATER SOURCE-: EW-1-060

LAB SAMPLE NUMBER - 50842

## LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010"

| COMPOUND                         | METHOD DETECTION LEVEL (uq/L) | ANALYTICAL<br>RESULTS |
|----------------------------------|-------------------------------|-----------------------|
| REGULATED VOC'S (DRINKING WATER) |                               |                       |
| Vinyl Chloride                   | 10.0                          | *ND                   |
| 1, 1-Dichlorgethylene            | 25.0                          | ИD                    |
| 1, 1, 1-Trichlorethane           | <b>25.</b> 0                  | ND                    |
| Carbon Tetrachloride             | 25 <b>.</b> 0                 | ND                    |
| 1.2-Dichloroethane               | <b>25.</b> 0                  | ND                    |
| Trichloroethylene                | 25.0                          | ИD                    |
| p-Dichlorobenzene                | <b>25.</b> 0                  | ND                    |
| Chlorobenzene                    | <b>25.</b> 0                  | ND                    |
| o-Dichlorobenzene                | <b>25.</b> 0                  | ND                    |
| cls-1, 2-Dichloruethene          | <b>25.</b> 0                  | ND                    |
| trans-1,2-Dichloroethene         | <b>25.</b> 0                  | ND                    |
| 1,2-Dichloruprupane              | 25.0                          | ND                    |
| Methylene Chloride               | 25.0                          | . ND                  |
| Tetrachloroethene                | <b>25.</b> 0                  | 140.0                 |
| 1, 2, 4-Trichlorobenzene         | 25.0                          | ND                    |
| 1,1,2-Trichloroethane            | 25.0                          | ИD                    |

Date Analyzed: 03/02/94 • ND = None Detected

Analyst: BRAD BRUKER

PORT COMT. MEXT PAGE

Lucanne Hovelly Lat

Labaratery Manager

PAGE 62

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104 Wost 31st Street Boise, Idaho 83714 Phone (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Soll Analysis

REPORT CONTINUED

"Lab No. 50842"

PAGE 2

| COMPOUND                                                                | METHOD DETECTION  LEVEL (Mg/L)       | Analytical<br><u>results</u> |
|-------------------------------------------------------------------------|--------------------------------------|------------------------------|
| THE'S (TRIHALOHETHANES)                                                 |                                      |                              |
| Bromodichloromethane<br>Chlorodibromomethane<br>Bromoform<br>Chloroform | 10.0<br>25.0<br>50.0<br>10.0<br>50.0 | -ND<br>ND<br>ND<br>ND<br>ND  |

## UMREGULATED VOC'S (DRINKING WATER)

|                              | METHOD DETECTION | ANALYTICAL      |
|------------------------------|------------------|-----------------|
| COMPOUND                     | LEVEL (ug/L)     | RESULTS (ug/L)  |
| Bromobenzen#                 | 25.0             | *ND             |
| Bromochloromethane           | 25.0             | ND <sub>.</sub> |
|                              | 100.0            | ND              |
| Bromomethane                 | 50.0             | ND              |
| Chloroethane                 | 25. 0            | ИĎ              |
| Chloromethane                | 25. 0            | ND              |
| 2-Chlorotoluene              | 25. 0            | ND              |
| 4-Chlorotoluene              | 250.0            | Ир              |
| 1,2-Dibromo-3-Chloropropane  | 75. O            | ND              |
| 1,2-Dibromoethane            | 200.0            | ND              |
| Dibromomethane               | 25.0             | ND              |
| 1,3-Dichlorobenzene          |                  | ND              |
| Dichlorodifluoromethane      | 25. 0            | ND              |
| 1,1-Dichloroethane           | 25. 0            | ND              |
| 1,3-Dichloropropane          | 25. 0            | מא              |
| 2,2-Dichloropropane          | 25. 0            | DN              |
| 1,1-Dichloropropene          | 25.0             | ДN              |
| Hexachlorobutadiene          | 25.0             | ИD              |
| 1, 1, 1, 2-Tetrachloroethane | 25.0             | ИD              |
| 1, 1, 2, 2-Tetrachloroethane | 25. 0            | ND              |
| Toluene                      | 25.0             | ND              |
| 1_2.3-Trichlorobenzene       | 25.0             | ND              |
| Trichlorofluoromethane       | 25.0             | ИD              |
| 1, 2, 3-Trichloropropane     | 25. 0            | ND              |

. ND = None Detected

ENT: VAN WATERS & ROGERS / ATTN: MIKE GAUDETTE



104 West 31st Street Boise, Idaho 83714

Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soll Analysis

## LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD.

BOISE, IDAHO

83709

DATE COLLECTED: 03/02/94

TIME COLLECTED: 05:00 DATE RECEIVED: 03/02/94

03/02/94

-Wh

DATE REPORTED:

SUBMITTED: B. GERGER

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR, BOISE MALL / WATER

SOURCE : EW-1-070

LAB SAMPLE NUMBER - 50843

LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010" 

|                                  | METHOD DETECTION | ANALYTICAL |
|----------------------------------|------------------|------------|
| COMPOUND                         | LEVEL (ug/L)     | RESULTS    |
| REGULATED VOC'S (DRINKING WATER) |                  |            |

|                             | 10.0                                    | # <b>#</b> D |
|-----------------------------|-----------------------------------------|--------------|
| Vinyl Chloride              | 25.0                                    | ND           |
| 1, 1-Dichloroethylene       | 25.0                                    | מא           |
| 1, 1, 1-Trichlorethane      | <del></del>                             | ND           |
| Carbon Tetrachloride        | 25.0                                    | • • • •      |
|                             | 25.0                                    | ДИ           |
| 1,2-Dichloroethane          | 25.0                                    | ND           |
| Trichloroethylene           | 25.0                                    | ДK           |
| p-Dichlorobenzene           | - · · · · · · · · · · · · · · · · · · · | ND           |
| Chlorobenzene               | 25.0                                    |              |
|                             | 25.0                                    | ИD           |
| o-Dichlorohenzene           | 25.0                                    | · ND         |
| cis-1, 2-Dichloroethene     | 25.0                                    | ND           |
| trans-1.2-Dichloroethene    | == =: :                                 | ND           |
| 1, 2-Dichloropropane        | 25.0                                    |              |
| 1, 2 D 1011201 0 P 0 P 1011 | 25.0                                    | ND           |
| Methylene Chloride          | 25.0                                    | 423. O       |
| Tetrachloroethene           | 25.0                                    | ND           |
| 1, 2, 4-Trichlorobenzene    |                                         | ND           |
| 1.1.2-Trichloroethane       | 25.0                                    | ND           |
| 1                           |                                         | <b></b>      |

Date Analyzed: 03/02/94

• ND = None Detected

Analyst: BRAD BROKER

RT CONT. NEXT PAGE

Laboratory Manager

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Water, Wasto Water and Soll Analysis

REPORT CONTINUED 

"Lab No. 50843"

| CONPOUND                                                                | HETHOD DETECTION<br>LEVEL (UG/L)     | ANALYTICAL<br>RESULTS         |
|-------------------------------------------------------------------------|--------------------------------------|-------------------------------|
| THE'S (TRIHALDMETHANES)                                                 |                                      |                               |
| Bromodichloromethane<br>Chlorodibromomethane<br>Bromoform<br>Chloroform | 10.0<br>25.0<br>50.0<br>10.0<br>50.0 | #ND<br>UM<br>D<br>D<br>D<br>D |

## IMPROULATED VOC'R (DRINKING WATER)

|                              | METHOD DETECTION | ANALYTICAL<br>RESULTS (ug/L) |
|------------------------------|------------------|------------------------------|
| COMPOUND                     | LEVEL (ug/L)     | ARBULIU                      |
|                              | <b>25.</b> 0     | •ND                          |
| Dromobenzene                 | 25.0             | ND                           |
| Browochleremethane           | 100.0            | ND                           |
| Browomethane                 | 50.0             | ND                           |
| Chloroethane                 | •                | ND                           |
| Chloromethane                | 25.0             | ND                           |
| 2-Chlorotuluene              | 25.0             | ND                           |
| 4-Chlorotoluene              | 25.0             | ND<br>ND                     |
| 1, 2-Dibromo-3-Chloropropens | 250.0            |                              |
| 1,2-Dibromoethane            | <b>75.</b> 0     | ND                           |
| Dibromomethane               | 200.0            | ND                           |
| 1.3-U1chlorobenzene          | 25.0             | ďЯ                           |
| T' 2-DICUTAL OPENSEUR        | 25.0             | ND                           |
| Dichloredifluoromethan       | 25.0             | ИD                           |
| 1, 1-Dighloroethene          | 25.0             | ND                           |
| 1,3-Dichloropropane          | 25.0             | ND                           |
| 2,2-Dichloropropane          | 25.0             | ND                           |
| 1,1-Dichloropropene          | 25.0             | ИЪ                           |
| Hexachlorobutadiene          |                  | ND                           |
| 1, 1, 1, 2-Tetrachloroethane | 25.0             | ND                           |
| 1, 1, 2, 2-Tetrachloroethane | 25, 0            | ND                           |
| Tolugne                      | 25. O            | ND                           |
| 1, 2, 3-Trichlorobenzane     | 25, 0<br>25, 0   | ND                           |
| Trichloroil wordsethane      | <del></del>      | D                            |
| 1, 2, 3-Trichloropyupane     | 25.0             | 74                           |

- ND = None Detested

ENT: VAN WATERS & ROGERS / ATTN: MIKE GAUDETTE



104 West 31st Street Bolse, Idaha 83714 Phone (208) 336-1172 FAX (208) 336-7124

Water, Waste Water and Soil Analysis

## LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD. BOISE, IDAHO

83709

DATE COLLECTED: 03/03/94

TIME COLLECTED: 13:30

DATE RECEIVED: 03/03/94 DATE REPORTED: 03/03/94

SUBHITTED: H. BEEKHAN

HR. MIKE GAUDETTE ATTENTION: PROJECT: VWR, BOISE HALL / WATER

SOURCE-: EW1-080H

LAB SAMPLE NUMBER - 50892

## LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010"

Date Analyzed: 03/03/94

• ND = None Detected

Analyst: BRAD BROKER

T CONT. NEXT PAGE

Howell, Laboratory Manager



104 West 31st Street Bolse, Idaho 83714 Phone (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Soil Analysis

REPORT CONTINUED

\*Lab No. 50892\*

PAGE 2

| COMPOUND                                                                               | LEVEL (ug/L)                         | RESULTS                     |
|----------------------------------------------------------------------------------------|--------------------------------------|-----------------------------|
| THE S (TRIHALOMETHANES)                                                                |                                      |                             |
| Bromodichloromethene<br>Chlorodibromomethene<br>Bromoform<br>Chloroform<br>Total THM's | 10.0<br>25.0<br>50.0<br>10.0<br>50.0 | *HD<br>HD<br>HD<br>ND<br>ND |

## UNREGULATED VOC'S (DRINKING WATER)

|                              | METHOD DETECTION | ANALYTICAL      |
|------------------------------|------------------|-----------------|
| COMPOUND                     | LEVEL (ug/L)     | RESULTS (ug/1.) |
| Arowobenzene                 | 25.0             | #MD             |
| Bromochloromethane           | 25. 0            | ND              |
| Browethane                   | 100.0            | ND              |
| Chloroethane                 | 50.0             | ND              |
| Chloromethane                | 25.0             | ND              |
| 2-Chlorotoluene              | 25.0             | nd              |
|                              | 25. 0            | ИD              |
| 4-Chlorotoluene              | 250, 0           | ND              |
| 1,2-Dibromo-3-Chloropropane  | 75. 0            | HD              |
| 1,2-Dibromoethane            | 200. 0           | ND              |
| Dibromowethane               | 25. 0            | ND              |
| 1,3-Dichlorobenzene          |                  | ND              |
| Dichlorodifluoromethane      | 25. 0            | ND              |
| 1,1-Dichloroethane           | 25. 0            | ND              |
| 1,3-Dichloropropane          | 25.0             | ND              |
| 2, 2-Dichloropropane         | 25. 0            | ND              |
| 1,1-Dichloropropene          | 25. 0            | ND<br>ND        |
| Hexachlorobutadiene          | 25.0             |                 |
| 1, 1, 1, 2-Tetrachloroethane | 25. 0            | ИD              |
| 1, 1, 2, 2-Tetrachloroethane | 25. 0            | nd<br>HD        |
| Toluene                      | 25.0             | מא              |
| 1,2,3-Trichlorobenzene       | 25. 0            | AD<br>GR        |
| Trichlorofluoromethane       | 25.0             | ND<br>ND        |
| 1, 2, 3-Trichloropropane     | 25. 0            | ML              |

• ND = None Detected

CLIENT: VAN WATERS & ROGERS / ATTN: MIKE GAUDETTE



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## LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD. BUISE, IDAHO

83709

DATE COLLECTED: 03/03/94
TIME COLLECTED: 13:45
DATE RECEIVED: 03/03/94
DATE REPORTED: 03/03/94

SUBMITTED: M. BEEKHAN

ATTENTION: HR. MIKE GAUDETTE PROJECT: VWR, BOISE HALL / WATER

SOURCE-: EW1-080C

B

LAB SAMPLE NUMBER - 50093

# LABORATORY REPORT FOR \*PURGABLE HALOCARBONS BY 8010\*

| COMPOUND                                                                                                                                                                                                                                                                                                                 | METHOD DETECTION  LEVEL (uq/L)                                    | RESULTS                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------|
| REGULATED VOC'S (DRINKING WATER)                                                                                                                                                                                                                                                                                         |                                                                   |                                          |
| Vinyl Chloride  1,1-Dichloroethylene  1,1,1-Trichlorethane Carbon Tetrachloride  1,2-Dichloroethane Trichloroethylene p-Dichlorobenzene Chlorobenzene chlorobenzene cis-1,2-Dichloroethene trane-1,2-Dichloroethene 1,2-Dichloropropane Methylene Chloride Tetrachloroethene 1,2,4-Trichloroethane 1,1,2-Trichloroethane | 10.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>2 | ND N |
| 1. 1. 2-11 100101 05 606                                                                                                                                                                                                                                                                                                 |                                                                   |                                          |

Date Analyzed: 03/03/94

ND = None Detected

Analyst: BRAD BROKER

PORT COMT. NEXT PAGE

Suzanne Howell, Laboratory Manager



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Phone (208) 336-1172 FAX (208) 336-7124

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Water, Waste Water and Soil Analysis

ND

ND

ND

| REPORT CONTINUED        | "Leb No. 50893"                  | PAGE 2                |
|-------------------------|----------------------------------|-----------------------|
| COMPOUND                | METHOD DETECTION<br>LEVEL (ug/L) | ANALYTICAL<br>RESULTS |
| THH'S (TRIHALOMETHANES) |                                  |                       |
| Browodichloromethane    | 10. 0<br>25. 0                   | •ND<br>ND             |

## UNREGULATED VOC'S (DRINKING WATER)

Chlorodibromomethene

Total THM's

Bromoform

Chloroform

|                                               | METHOD DETECTION LEVEL (ug/L) | ANALYTICAL RESULTS (vg/L) |
|-----------------------------------------------|-------------------------------|---------------------------|
| COMPOUND                                      |                               | <del></del>               |
|                                               | 25. 0                         | -ND                       |
| Bromobenzene                                  | 25. 0                         | nd                        |
| Bromochloromethane                            | 100.0                         | ДK                        |
| Bromomethane                                  | 50.0                          | ND                        |
| Chloroethane                                  | 25.0                          | ND                        |
| Chloromethane                                 |                               | ND                        |
| 2-Chlorotoluene                               | 25.0                          | ND                        |
| 4-Chlorotoluene                               | 25.0                          | ИD                        |
| 1,2-Dibromo-3-Chloropropene                   | 250.0                         | ND                        |
| 1.2-Dibromoethane                             | <b>75.</b> 0                  | ND                        |
| Dibromomethane                                | 200.0                         | ND<br>ND                  |
| 1,3-Dichlorobenzene                           | 25.0                          |                           |
| Dichloredifluoromethane                       | 25. 0                         | ND                        |
| 1,1-Dichloroethane                            | 25. U                         | HD                        |
| 1.3-Dichloropropane                           | 25.0                          | HD                        |
| 2, 2-Dichloropropane                          | 25.0                          | ND                        |
| 1, 1-Dichloropropene                          | 25.0                          | ND                        |
|                                               | 25. 0                         | ND                        |
| Hexachlorobutadiene                           | 25. 0                         | HD                        |
| 1, 1, 1, 2-Tetrachloroethane                  | 25.0                          | nd                        |
| 1, 1, 2, 2-Tetrachloroethane                  | 25.0                          | ND                        |
| Toluene                                       | 25.0                          | НD                        |
| 1,2,3-Trichlorobenzene                        | 25.0                          | ИD                        |
| Trichlorofluoromethane 1,2,3-Trichloropropane | 25. 0                         | ND                        |

. ND = None Detected

VAN WATERS & ROGERS / ATTN1



104 West 31st Street Boise, Idaho 83714 Phone (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Soll Analysis

#### LABORATORY REPORT

YAN WATERS & ROGERS

2723 S. COLE RD. BOISE, IDAHO

83709

DATE COLLECTED: 03/03/94

TIME COLLECTED: 07:00

DATE RECRIVED: 03/03/94

DATE REPORTED: 03/03/94 SUBMITTED: M. BEEKMAN

ATTENTION: HR. HIKE GAUDETTE

PROJECT: YWR, BOISE MALL / WATER

SOURCE-: EW1-090C

LAB SAMPLE NUMBER - 50894

## LABORATORY REPORT FOR "PURGABLE HALOCARBONS BY 8010"

| Ç | DRPOUND                          | NETHOD DETECTIONLEVEL (ug/L) | ANALYTICAL RESULTS |
|---|----------------------------------|------------------------------|--------------------|
|   | REGULATED VOC'S (DRINKING WATER) |                              |                    |
|   | Vinyl Chloride                   | 10.0                         | •ND                |
|   | 1,1-Dichloroethylene             | 25.0                         | ND                 |
|   | 1, 1, 1-Trichlorethane           | 25.0                         | ND                 |
|   | Carbon Tetrachloride             | <b>25.</b> 0                 | ND                 |
|   | 1,2-Dichloroethane               | <b>25.</b> 0                 | ЯD                 |
|   | Trichloroethylene                | 25.0                         | ND                 |
|   | p-Dichlorobenzene                | 25.0                         | ND                 |
| _ | Chlorobenzene                    | <b>25.</b> 0                 | ND .               |
|   | o-Dichlorobenzene                | 25.0                         | ND                 |
|   | cis-1, 2-Dichloroethene          | 25.0                         | ND                 |
|   | trans-1,2-Dichloroethene         | 25.0                         | ND                 |
|   | 1,2-Dichloropropane              | 25.0                         | ND                 |
|   | Methylene Chloride               | 25.0                         | ND                 |
|   | Tetrachloroethene                | 25.0                         | 1550.0             |
|   | 1, 2, 4-Trichlorobenzene         | 25.0                         | ND                 |
|   | 1, 1, 2-Trichloroethane          | 25.0                         | ND                 |
|   |                                  | 医环状体 化氯甲基苯甲甲基苯甲甲甲苯甲甲甲        | *****              |
|   |                                  | 145 II W. A                  | A                  |

Date Analyzed: 03/03/94

\* ND = None Detected

Analyst: BRAD BROKER

PORT CONT. NEXT PAGE

Suzanne Hovell, Laboratory Manager



104 West 31st Street Bolse, Idaho 83714 Phone (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Soll Analysis

REPORT CONTINUED

\*Lab No. 50894\*

PAGE :

| COMPOUND                                                                               | METHOD DETECTION  LEVEL (UQ/L)       | ANALYTICAL<br>RESULTS        |
|----------------------------------------------------------------------------------------|--------------------------------------|------------------------------|
| THM'S (TRIHALOMETHAMES)                                                                |                                      |                              |
| Bromodichloromethane<br>Chlorodibromomethane<br>Bromoform<br>Chloroform<br>Total THM's | 10.0<br>25.0<br>50.0<br>10.0<br>50.0 | ДИ »<br>ДИ<br>ДИ<br>ДИ<br>ДИ |

### UNREGULATED VQC's (DRINKING WATER)

|                              | HETHOD DETECTION | ANALYTICAL     |
|------------------------------|------------------|----------------|
| COMPOUND                     | LEVEL (ug/L)     | KESULTS (VQ/L) |
| Bromobenzene                 | 25.0             | •ND            |
| Bromochloromethane           | 25. 0            | ND             |
| Bromomethane                 | 100.0            | ND             |
| Chloroethane                 | 50 <b>. 0</b>    | nd             |
| Chloromethane                | 25. 0            | ND             |
| 2-Chlorotoluene              | 25.0             | ИD             |
| 4-Chlorotoluene              | 25, 0            | nd             |
| 1.2-Dibromo-3-Chloropropane  | 250.0            | ND             |
| 1,2-Dibromoethane            | 75. O            | nd nd          |
| nibromomethane               | 200.0            | ИD             |
|                              | 25.0             | ND             |
| 1,3-Dichlorobenzene          | 25.0             | ND             |
| Dichlorodifluoromethane      | 25. 0            | ND             |
| 1,1-Dichloroethane           | 25.0             | ND             |
| 1,3-Dichloropropane          | 25. 0            | ND             |
| 2, 2-Dichloropropane         | •                | ND             |
| 1,1-Dichloropropens          | 25.0             | סא             |
| Hexachlorobutadiene          | 25.0             | ND             |
| 1,1,1,2-Tetrachloroethane    | 25.0             | ND<br>ND       |
| 1, 1, 2, 2-Tetrachloroethane | 25.0             | MD             |
| Toluene                      | 25.0             | ND             |
| 1,2,3-Trichlorobenzene       | 25.0             | ND             |
| Trichlorofluoromethane       | 25.0             | ND             |
| 1, 2, 3-Trichloropropane     | 25.0             |                |

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CLEENT: VAN WATERS & ROGERS / ATTN: MIKE GAUDETTE



104 West 31st Street Boise, Idaho 83714 Phone (208) 336-1172 FAX (208) 336-7124 Water, Waste Water and Soll Analysis

### LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD.

BOISE, IDAHO

83709

DATE COLLECTED: 03/03/94

TIME COLLECTED: 21:45

DATE RECEIVED: 03/04/94

DATE REPORTED: 03/04/94

SUBMITTED: B. GERGER

ATTENTION: MR. MIKE GAUDETTE

PROJECT: VWR, BOISE MALL / WATER

SOURCE-: EW-1-090H

LAB SAMPLE NUMBER - 50942

# LABORATORY REPORT FOR \*PURGABLE HALOCARBONS BY 8010\*

|                                                 | METHOD DETECTION | ANALYTICAL<br>RESULTS |
|-------------------------------------------------|------------------|-----------------------|
| CONPOUND                                        | LEVEL (ug/L)     |                       |
| REBULATED VOC'S (DRINKING WATER)                |                  |                       |
| Vinyl Chloride                                  | 10.0             | •HD                   |
| 1,1-Dichloroethylene                            | 25.0             | ND                    |
| 1, 1, 1-Trichlorethane                          | 25.0             | ND                    |
| Carbon Tetrachloride                            | 25.0             | ND                    |
| 1,2-Dichloroethane                              | 25.0             | ND                    |
| Trichloroethylene                               | 25.0             | ИD                    |
| p-Dichlorobenzene                               | 25.0             | ИD                    |
| . Chlorobenzene                                 | 25.0             | ND                    |
| o-Dichlorobenzene                               | 25.0             | ND                    |
| cis-1,2-Dichloroethene                          | 25.0             | ND                    |
| Lrens-1, 2-Dichloraethene                       | 25.0             | ND                    |
|                                                 | 25.0             | ND                    |
| 1,2-Dichloropropane<br>Methylene Chloride       | 25. 0            | ИD                    |
|                                                 | 25. 0            | 233.0                 |
| Tetrachloroethene                               | 25. 0            | ИD                    |
| 1,2,4-Trichlorobenzene<br>1,1,2-Trichloroethane | 25.0             | ND                    |

Date Analyzed: 03/04/94

• ND = None Detected

Analyst: BRAD BROKER

RT CONT. MEXT PAGE

Suzanne Hovell, Laboratory Manager



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REPORT CONTINUED

Lab No. 50942\*

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| CORPOUND                                                                | LEVEL (ug/L)                         | RESULTS               |
|-------------------------------------------------------------------------|--------------------------------------|-----------------------|
| THR'S (TRIBALOMETHAMES)                                                 |                                      |                       |
| Bromodichloromethane<br>Chlorodibromomethane<br>Bromoform<br>Chloroform | 10.0<br>25.0<br>50.0<br>10.0<br>50.0 | •ND<br>ND<br>ND<br>ND |

## UNREGULATED VOC's (DRINKING WATER)

| COMPOUND                                      | LEVEL (uq/L)   | ANALYTICAL<br>RESULTS (49/L) |
|-----------------------------------------------|----------------|------------------------------|
| Bromobenzene                                  | 25.0           | -ND                          |
| Brumachloromethane                            | 25.0           | ND                           |
| Bromomethane                                  | 100.0          | ND<br>ND                     |
| Chlorowthane                                  | 50. O          | ND<br>ND                     |
| Chloromethane                                 | 25.0           | ИD                           |
| 2-Chlurotoluene                               | 25.0           | ND<br>ND                     |
| 4-Chlorotoluene                               | 25.0           | ИD                           |
| 1, 2-Dibromo 3-Chloropropane                  | 250.0          | ND                           |
| 1, 2-Dibromoethane                            | <b>75.</b> 0   | พท                           |
| Dibromomethane                                | 200.0          |                              |
| 1.3-Dichlorobenzene                           | 25.0           | . ND                         |
| Dichlorodifluoromethone                       | 25.0           | ИD                           |
| 1,1-Dichloroethane                            | 25.0           | ND                           |
| 1,3-Dichloropropuse                           | 25.0           | ND                           |
| 2, 2-Dichloropropane                          | <b>25.</b> 0   | ND                           |
| 1, 1-Dichloropropene                          | 25. N          | ND                           |
| Hexachlorobutadiene                           | <b>25.</b> 0   | ND                           |
| 1, 1, 1, 2-Tetrachloroethane                  | 25. 0          | ND                           |
| 1, 1, 2, 2-Tetrachloroethane                  | <b>25.</b> 0   | ИD<br>ND                     |
| Toluene                                       | 25.0           | UN<br>QN                     |
| 1,2,3-Trichlorobenzene                        | 25.0           | ND                           |
| Trichlurofluoromethane 1,2,3-Trichloropropane | 25. 0<br>25. 0 | ND                           |

\* ND = None Detected





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### LABORATORY REPORT

VAN WATERS & ROGERS 2723 S. COLE RD.

BOISE, IDAHO 83709

DATE COLLECTED: 03/03/94

TIME COLLECTED: 23:45
DATE RECEIVED: 03/04/94

DATE REPORTED: 03/04/94

SUBMITTED: B. GERGER

ATTENTION: NR. NIKE GAUDETTE PROJECT: VWR, BOISE MALL / WATER

SOURCE-: EW-1-095H

LAB SAMPLE NUMBER - 30943

# LABORATORY REPORT FOR PPURGABLE HALOCARBONS BY 8010\*

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------|
| COMPOUND                                                                                                                                                                                                                                                                                                | LEVEL (ug/L)                                                                                         | RESQUID                                  |
| REGULATED YOC'S (DRINKING WATER)                                                                                                                                                                                                                                                                        |                                                                                                      |                                          |
| Vinyl Chloride  1,1-Dichloroethylene  1,1,1-Trichlorethane Carbon Tetrachloride  1,2-Dichloroethane Trichloroethylene p-Dichlorobenzene Chlorobenzene c-Dichlorobenzene cis-1,2-Dichloroethene trans-1,2-Dichloroethene 1,2-Dichloropropane Methylene Chloride Tetrachloroethene 1,2,4-Trichlorobenzene | 10.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0<br>25.0 | • ND  ND  ND  ND  ND  ND  ND  ND  ND  ND |
| 1, 1, 2-Trichloroethene                                                                                                                                                                                                                                                                                 |                                                                                                      | **********                               |

Date Analyzed: 03/04/94 • ND = None Detected

Analyst: BRAD BROKER

PORT CONT. MEXT PAGE

Suzapne Hovell, Laboratory Hanage



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REPORT CONTINUED

"Lab No. 50943"

HERMIN LINES

PAGE

| COMPOUND                                                                                | METHOD DETECTION  LEVEL (ug/L)       | ANALYTICAL<br>RESULTS        |
|-----------------------------------------------------------------------------------------|--------------------------------------|------------------------------|
| THE'S (TRIMALOMETHARES)  Bromodichloromethane Chlorodibromomethane Bromoform Chloroform | 10.0<br>25.0<br>50.0<br>10.0<br>50.0 | • ND<br>ND<br>ND<br>ND<br>ND |
| Total THM's                                                                             |                                      |                              |

## UMREGULATED VOC'E (DRINKING WATER)

| COMPONIND                                        | METHOD DETECTION  LEVEL (UG/L) | RESULTS (Vg/L) |
|--------------------------------------------------|--------------------------------|----------------|
| CONFOUND                                         |                                | *ND            |
|                                                  | 25.0                           |                |
| Bromobenzene                                     | 25.0                           | ND             |
| Bromochloromethane                               | 100.0                          | ИĎ             |
| Bromomethane                                     | 50.0                           | ND             |
| Chloroethane                                     | 25.0                           | ИD             |
| Chloromethane                                    | 25.0                           | ИD             |
| 2-Chlorotoluene                                  | 25.0                           | ND             |
| 4-Chlorotoluene                                  | 250. 0                         | ND             |
| 1, 2-Dibromo-3-Chloropropane                     | 75.0                           | ND             |
| 1,2-Dibrosoethane                                | 200.0                          | ND             |
| Dibromomethane                                   | 25.0                           | ND             |
| 1.3-Dichlorobenzene                              |                                | ND             |
| Dichlorodifluoromethene                          | 25.0                           | ИD             |
| 1,1-Dichloroethane                               | 25.0                           | ДK             |
| 1,3-Dichloropropane                              | 25.0                           | ND             |
| 2, 2-Dichloropropane                             | 25.0                           | ND             |
| 1,1-Dichloropropene                              | 25.0                           | ND             |
| Hexachlorobutadiene                              | 25.0                           | ND             |
| 1, 1, 1, 2-Tetrachloroethane                     | 25.0                           |                |
| 1, 1, 2, 2-Tetrachloroethene                     | 25.0                           | UN CHA         |
|                                                  | 25. 0                          | nd<br>Hd       |
| Toluene<br>1,2,3-Trichlorobenzene                | 25.0                           |                |
| 1,2,3-171Chldrobenzand<br>Trichlorofluoromethane | 25.0                           | ND             |
| 1.2,3-Trichloropropane                           | 25.0                           | ND             |

. ND = None Detecte

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